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Our Cover: In this fanciful lithograph published the year of the event—a century ago this summer—Commodore George Dewey, on board his flagship, USS *Olympia*, leads the U.S. Navy's Asiatic Squadron into Manila Bay to destroy the Spanish squadron at Cavite. Image courtesy of Sigrid Trumpy of the Beverley R. Robinson Collection, U.S. Naval Academy.

The Secretary of the Navy has determined that this publication is necessary in the transaction of business required by law of the Department of the Navy. Funds for printing this publication have been approved by the Navy Publications and Printing Policy Committee.

[On October 20, 1997, ground was officially broken for the College's new Strategic Maritime Research Center. The remarks which follow, made by Naval War College President Rear Admiral James R. Stark, USN, are repeated here to enable our readers to share in the excitement of this special event.]

Senator Chafee, Senator Reed, Senator Pell, Congressman Kennedy, Congressman Weygand, Congressman Machtley, Admiral Johnson, distinguished guests, ladies and gentlemen.

Welcome to the Naval War College and a long-awaited event . . . the groundbreaking ceremony for our new War Gaming Center. All of you honor us with your presence, and we are extremely pleased that we could have so many key individuals here with us today from Washington, including the Chief of Naval Operations and the entire Rhode Island congressional delegation.

As we consider this institution and the Navy on the eve of the twenty-first century, it's perhaps useful to reflect on how far America and the War College have come since the College was founded over a hundred years ago.

Rear Admiral Stark was commissioned in 1965 at the U.S. Naval Academy, studied at the University of Vienna as a Fulbright Scholar, and earned a doctorate in political science at The Fletcher School of Law and Diplomacy, Tufts University. He has served on the Navy Staff, the National Security Council Staff, and as Executive Director of the Chief of Naval Operations Executive Panel. His sea service has included command of USS *Julius A. Furer* (FFG 6), USS *Leahy* (CG 16), and, from 1994 to 1995, the Nato Standing Naval Force Atlantic, deployed in the Adriatic Sea. He assumed the duties of President of the Naval War College in June 1995.

When the first spade of earth was turned in the early 1890s to mark the start of construction on Luce Hall, our first brand-new building, President Benjamin Harrison was in the White House. The cruiser USS *New York* had just set a new world's speed record of twenty-one knots, and Samuel Langley had recently published a revolutionary paper entitled "Experiments in Aerodynamics," in which he discussed the *possibility* of manned flight. The American frontier was still open for settlement, and the United States still thought of itself as a continental power. Contrast that, if you will, with the situation today. Our ships and submarines have the latest in gas turbine and nuclear propulsion. Our armed forces have weapons of a reach and lethality not even dreamed of just a few years ago. Radio, television, the airplane, and the Internet have changed the entire nature of our culture and communications. We have put men on the moon and sent probes into outer space. America today is the undisputed leader of the world, both politically and economically.

But despite all the enormous changes that have altered our lives over the past century, some things aren't all that different. Look at the Naval War College. A hundred years ago, at a time of immense technological change, we here in Newport were studying the essentials of our profession; seeking to understand the nexus between strategy, policy, and military power; examining the impact of that earlier, Victorian revolution in military affairs on our tactics and organization and training; and imparting that knowledge to an inquiring group of naval officers. A hundred years ago, the Naval War College had just introduced war gaming to America, and we were the center of that expertise on this side of the Atlantic.

I hope some of the things in that description of the War College sound familiar—that they strike a responsive chord—because I think it's a very accurate description of what we still do today. Even though the technology of war and the role of the United States in global affairs are worlds apart from the 1890s, we're still teaching our students how to analyze and think about the tough problems of national security. And we're still the center of high-level war gaming in this country, even as it's evolved from moving pieces around a game board to sophisticated computer simulation.

This morning, we celebrate the beginning of the next chapter in the War College's remarkable history. In just a few days, construction will begin on the Strategic Maritime Research Center—a 103,000-square-foot, state-of-the-art building which will house our War Gaming Department. It will have lots of computer space, fiber-optic cabling, the latest in audio-visual technology, and most important, computer and communications links with other military facilities for long-distance war gaming and planning. It's a building which will play a major role in support of our Fleet Battle Experiments and naval innovation.

I have to admit that the process that led us to today's groundbreaking ceremony has been a real roller-coaster—and a useful lesson in civics, too. From the time we first determined that the old war gaming center in Sims Hall just couldn't handle all the upgrades needed to meet the needs of the twenty-first century, we have worked very hard to identify funding, come up with a good design, and then bring it all to reality.

Thanks initially to the efforts of former Congressman Ron Machtley, we were able to get the first ten million dollars. It didn't buy us the whole building, but it was a great start. After that, the entire Rhode Island congressional delegation pitched in to make sure we got the remainder of the funding. For each of those senators and congressmen as well as their staffs, I want to say how thankful all of us are for your unstinting support. We wouldn't be here if it hadn't been for your help. We also needed assistance from the Pentagon, too. I can guarantee it wasn't easy finding money in a very tight budget, and I can only imagine all the accounting gyrations the Navy Staff had to go through to make this a reality. So, Admiral Johnson, I'm also very grateful for your help in making today possible.

Just as we had lots of help in getting funding, we also had lots of assistance in planning how to spend it effectively. Rear Admiral Mike Shelton from the Naval Facilities Engineering Command; Captain Bill Fogarty of NAVFAC Northern Division; and Captain John Wyman, the Officer in Charge of Construction here in Newport, have all been very supportive in the design and contract review. As those of you who have seen the artist's design of the building can attest, we were especially fortunate to have the services of one of the top architectural and engineering firms in the country—Shepley Bulfinch, Richardson, and Abbot. Jim Hunnewell has led their team and has done an absolutely superb job. And, less than a month ago, the contract for the new building was awarded to A. F. Lusi Construction Company, one of the top firms in the region, and one who comes to us with a great reputation for quality. We're all looking forward to working together with them.

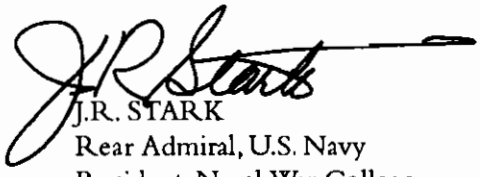
As many of you have certainly noticed, we've been referring to our new building as the Strategic Maritime Research Center. And that was perfectly appropriate in the conceptual and design stages. It captured very accurately the reason for the building and what we were designing it for. But the term has some limitations. Because "Strategic Maritime Research Center" is a long name, people tend to refer to it by its initials: S-M-R-C. Unfortunately, they also usually combine them into a single acronym—the "Smirk"—which didn't sound great. But we also need to remember that all the buildings here are named for important naval leaders who have had close ties with the War College—Mahan, Sims, and Spruance. Coming from a very traditional culture, we wanted to

continue to do that. So we did some research and submitted our recommendations to Washington. The approval came back just a couple of weeks ago.

It gives me a great deal of pleasure to announce this morning that our new war gaming center will henceforth be called McCarty Little Hall. It is being named for Captain William McCarty Little, a pioneer who joined our staff in its second year of existence and who introduced war gaming to the Naval War College back in 1886; who was instrumental in bringing to Newport the analytical approach known as the "commander's estimate of the situation," which we still use today throughout all the armed forces; and who stayed on at the War College for nearly thirty years, ensuring—along with Mahan and Luce—that this institution was steady on course and headed in the right direction. We owe him a great deal, and I think it's an absolutely perfect match.

Back in 1892, when Luce Hall was constructed for the princely sum of eighty-three thousand dollars, the distinguished officials who gathered to dedicate that building could scarcely have predicted where the next hundred years would take us. Today, the situation isn't all that different. I couldn't begin to speculate on what the world will be like in sixty or seventy or a hundred years from now—what new revolutions technology will bring, or what awkward surprises the future has in store for us—except for two things. First, I'm absolutely certain our Navy will continue to play an indispensable role in protecting America's interests and national security around the world, just as we do today. And second, this institution—the Naval War College—will have a major part in keeping it that way. And I'm very confident that this new building—McCarty Little Hall—will be an important part of that effort.

We will keep you up to date as the building takes shape. The Naval War College is reinventing itself for the twenty-first century, and great things are ahead for all of us, and for our Navy!



J.R. STARK
Rear Admiral, U.S. Navy
President, Naval War College

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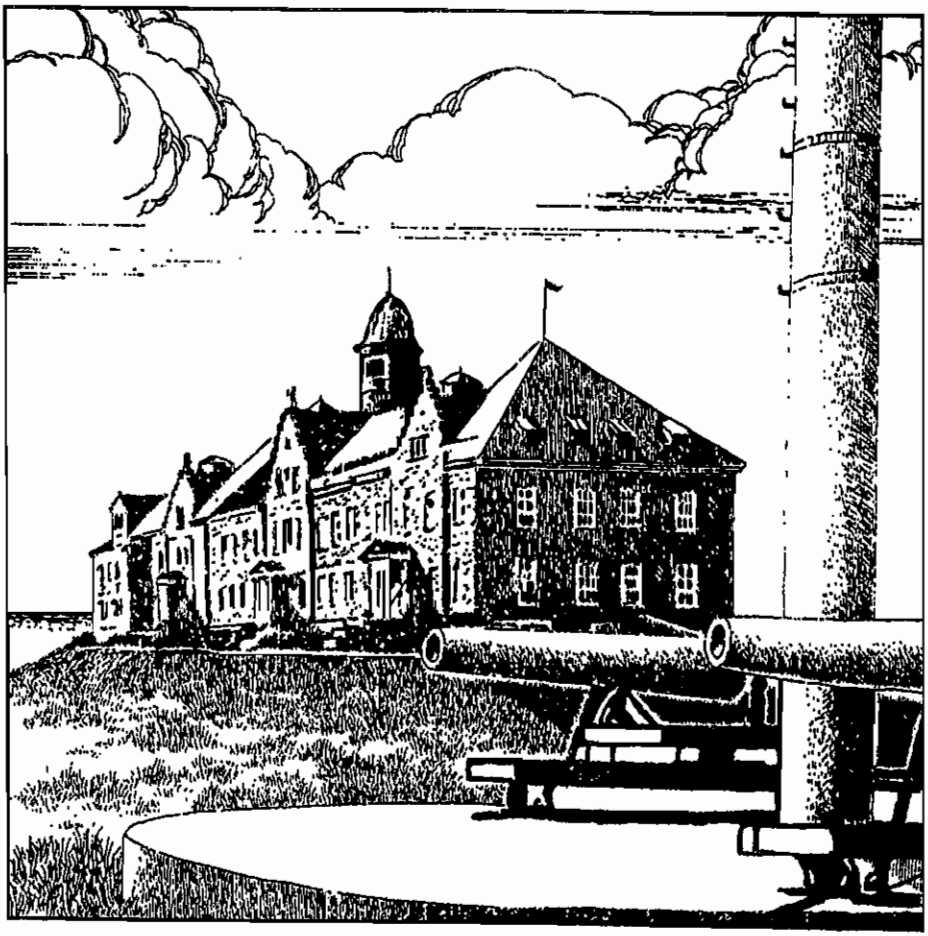

Naval War College
Newport, Rhode Island

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The Cultural Challenge of Information Technology

Captain James R. FitzSimonds, U.S. Navy

THERE HAS BEEN INCREASING SPECULATION over the past several years that rapid advances in information technologies will enable tremendous leaps in future combat systems performance. Perhaps the most significant development is the prospect that new high-data-rate communications satellites will soon offer worldwide wireless information transmission capacities that can fully exploit the tremendous speed of modern information processing.[1] If achieved, this "bandwidth on demand" will allow virtually unlimited amounts of information to be exchanged in real time between positions anywhere on the globe.

Since it was first introduced just over a century ago, wireless radio has been used by militaries to link together geographically scattered platforms for mutual coordination and support. Given limitations on data-transmission capacity, range, and reliability, military operations have been characterized by largely autonomous multipurpose platforms or units operating in relative independence of one another. However, the prospect of unlimited bandwidth is now stimulating efforts aimed at creating a fully integrated operational network of widely dispersed sensors, weapons, and command entities that will effectively function as a single combat unit—the so-called "system of systems."[2] This is a central goal for future U.S. military forces, articulated in the 1997 Quadrennial Defense Review, the Joint Chiefs of Staff "Joint Vision 2010," and the individual service visions.[3] Some predict that creation of this system of systems will lead

Captain FitzSimonds holds the Edwin D. Layton Chair of Military Intelligence at the Naval War College. His afloat assignments include service on board USS *Blakely* (FF 1072) and USS *Enterprise* (CVN 65), and as Deputy Chief of Staff for Intelligence for the USS *America* (CV 66) battle group. Ashore assignments include the staff of the Chief of Naval Operations and the Net Assessment Directorate of the Office of the Secretary of Defense. A 1974 graduate of the U.S. Naval Academy, Captain FitzSimonds holds an M.S. degree from the Massachusetts Institute of Technology and is a distinguished graduate of the Industrial College of the Armed Forces.

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in the relatively near term to transition from military operations based on the coordinated actions of individual platforms to an approach centered on the network itself—what is being called "network-centric warfare."[4]

The full integration of battlefield systems within a common information network appears to hold out the prospect of three significant advances. First, networking of long-range sensors and weapons allows for the simultaneous massing of dispersed fires on common targets—thus achieving greater combat effectiveness per unit of force. Second, geographic dispersal enabled by the network improves own-force protection by denying lucrative targets to the enemy's long-range strike systems. Third and perhaps most importantly, full networking of information between units would appear to allow a tremendous increase in the tempo of operations, reducing the delay between observation and action on the battlefield. Some proponents foresee a transition to a wholly new measure of combat effectiveness whereby "speed of command" replaces attrition of enemy forces as the battlefield goal.[5] The idea is that a higher relative speed of operations should make possible preemptive actions that effectively forestall an enemy commander's options. Denied an ability to take the initiative without unacceptable risk of being destroyed, the enemy is theoretically paralyzed. Some maintain that the mere prospect of such command paralysis may deter aggression from the outset.[6]

The pace of information systems development suggests that the real challenge ahead, however, is not so much technological as organizational—that is, how best to organize people around these systems so as to exploit fully their capabilities. There has been considerable speculation about future military-technical possibilities, but there has been remarkably little discussion about the prospect of future concomitant organizational change within the military services. Historians of military innovation would not be surprised. All military organizations are self-contained societies with distinct cultural characteristics, including unique customs, rituals, social hierarchies, and narrowly defined criteria for membership and promotion. In his now-classic study of innovation in the U.S. Navy, Elting Morison observed that the introduction of a new technology into the military places in jeopardy—and indeed may even destroy—many long-standing "mores and structures" of the established military society.[7] He concluded that this *cultural* impact of organizational change has been the primary impediment to the exploitation of new technologies, often delaying by a generation or more even improvements commonly acknowledged to be in the best interest of the service. Potential cultural resistance to the exploitation of emerging information technologies is not yet clear, but the problems experienced by the U.S. Navy in its effort to incorporate wireless radio into fleet operations a century ago offers some insight into the types of challenges that lie ahead for all of the military services.[8]

The Wireless Revolution

The military utility of wireless was readily apparent to most of the world's navies soon after Guglielmo Marconi first demonstrated radio communication between ship and shore in 1897; wireless radio systems were rapidly acquired and installed on the major warships of the principal fleets of the world. The subsequent impact of wireless on naval operations is hard to overstate. Since sensors and communications had been limited to relatively short line-of-sight distances, formations of ships had little prospect of encountering enemy units while having sufficient firepower for a successful engagement unless they hovered close to ports or coastal chokepoints. Thus, prior to 1900 only one naval battle is known to have been fought far beyond sight of land.[9] With the arrival of wireless, dedicated platforms such as fast scout cruisers and aircraft could search out to extended ranges, and long-range communications could be used to effect a geographic massing of the battle fleet against the enemy. Not only did this horizontal network of sensors, weapons, and command authorities greatly expand the potential battle space, but fleets with superior information relative to an adversary could exercise much greater control than previously over the time and place of an engagement—multiplying their effectiveness by massing mobile units rapidly where and when desired.

The British navy was among the world's leaders in exploiting wireless, introducing radio for fleet scouting in maneuvers off the British Isles in 1899. In that same year the U.S. Navy conducted its first successful tests of wireless afloat, prompting the Bureau of Equipment to press for the installation of wireless sets in all major warships and shore headquarters. Although wireless equipment was made readily available to U.S. warships, however, it saw little or no operational use for nearly two decades. There was no concerted effort by afloat units to exploit it, and the equipment was generally ignored by at-sea commanders. Radio discipline was practically nonexistent, and traffic was dominated by operator talk and personal messages. Since no attempt was made to limit output power over short distances, interference on the Navy's single frequency for wireless traffic was a persistent problem.[10] As late as 1912 the U.S. Navy had no standardized procedures for fleet radio communications. With little fleet support, wireless equipment seldom received adequate attention for installation, operations, maintenance, or training. For the most part, radio was relegated to enlisted personnel and little noticed by shipboard officers.

To be sure, there were many problems to be overcome in the early years of wireless. The prospects of jamming and signal interception were thought by some to make radio of questionable utility during wartime;[11] in addition, technical problems persisted with the many new types of equipment being procured. But as Susan Douglas concludes in her study of the Navy's adoption

of wireless radio, these factors appear to have had less to do with the failure to exploit wireless at sea than did the organizational and cultural changes that arose with efforts to incorporate long-range communications into fleet operations.[12] For the line officer afloat, the operational advantages were outweighed by the reduction in individual authority and prerogative likely to result from instant contact with superiors—especially those ashore. Prior to wireless commanding officers had exercised virtually unlimited independence once beyond visual or telegraphic contact with senior commanders. In view of the service's tradition of independent operations (the U.S. Navy did not institute a permanent fleet organization until 1907), the degree of centralized control that wireless offered threatened to change radically the criteria by which the profession and society of the line officer—the "corps of command"—defined itself.[13] One anti-wireless writer of the period expressed concern that the "independent action of fleet commanders in war" would be "interfered with by those far from the scene"; he viewed with great concern the prospect of "a fleet commander in a few years directing a battle at sea with his ear attached to a wireless telephone and repeating with megaphone the order buzzed into his ears from some departmental head hundreds of miles away."[14]

Radio was seen to deny critical initiative in combat situations. Commanders would no longer be able to exercise Nelson's prerogative of "looking at an unwelcome signal through his blind eye," or to replicate Commodore Dewey's decision to "cut cable communication with the outside world and 'go it alone'" into Manila Bay.[15] This view was commonly shared throughout the afloat hierarchy, where even senior line officers generally acquiesced when subordinate ship captains "often simply shut down their radios at sea so as to avoid receiving undesirable orders."[16]

The organizational changes necessary to exploit wireless were eventually adopted by the U.S. Navy on the eve of World War I. Such changes were inevitable given the tremendous impact of radio on warfare at sea and the significant operational advantages rapidly accruing to rivals abroad. But the transition was prolonged, and it relied heavily upon the determined efforts of a few key individuals willing to defy the service's prevailing cultural norms.[17] The operational penalty for delay might have been steep had the United States been confronted with a serious naval challenge prior to 1917.

Critics who had seen wireless reducing the authority of the commanding officer at sea have indeed proven correct. Command authority has migrated upward throughout the twentieth century as communications capabilities have expanded, most notably through the introduction of automated computer-to-computer tactical data exchanges among ships and aircraft in the 1960s and the introduction of long-range satellite communications in the 1970s. However,

because of the technical limitations on communications range, capacity, and reliability, the individual commanding officer's leadership has not, as some feared, been rendered "merely titular."[18] In fact, the commanding officer afloat has preserved most of the prerogatives and powers by which command authority at sea has traditionally been defined. However, when one looks ahead to the prospect of virtually unlimited movement of information made possible by emerging satellite communications systems, it does not appear that this traditional concept of command authority—either afloat and ashore—will continue to be immune from major change.

Organizing for Network Warfare

Information networks will potentially enable soldiers and seamen at the lowest levels to know as much as the most senior commanders about the combat situation throughout an entire theater of operations. They will know about lucrative enemy targets, potential threats to their own survival, and the location and status of their own forces and strike assets. "Joint Vision 2010" predicts that the result of this information networking will be a decentralization of command authority, with "individual warfighters . . . empowered as never before."[19] This view reflects an expectation that expanding information flows will enable command authority to migrate downward to the lowest echelons, offering unprecedented opportunities for initiative and independent operations by individuals and small units—what has been termed "decentralized empowerment."[20] Some envision the ultimate combat organization as a network of distributed systems with individual nodes exchanging information laterally and acting independently in pursuit of common system goals—an organization essentially freed from centralized authority altogether. This is undoubtedly (from a narrowly professional point of view) every warrior's ultimate desire—unlimited authority to apply unlimited lethality.

But are these organizational outcomes likely? Will emerging information technologies in fact reverse the trend toward centralization and relative reduction in command authority that has been proceeding since the introduction of wireless communications? Perhaps so, but several factors suggest that a more likely prospect is that of a very rapid movement toward even greater command centralization on the battlefield, accompanied by an unprecedented reduction in both individual and command authority.

Flattening the Command Hierarchy for Speed. The achievement of "bandwidth on demand" may represent final confirmation that the ability of machines to manipulate and move data has far outpaced individual human capacity to comprehend and act on that information. In the quest for increased speed of

operations through system networking, the human decision maker is likely to become conspicuous as the primary impediment to further progress.[21] Better filtering and display of information, along with better training, can mitigate somewhat the limitations of the human brain, but there seems to be a growing consensus that truly significant increases in system speed will require the removal of as many humans as possible from the decision-making process.[22]

One approach is to establish direct communications connectivity between senior headquarters and combat sensors or weapons—thus making the traditional pyramid-shaped command hierarchy "flat" by discarding the intervening echelons that have traditionally passed and filtered information between those who command and those who execute. Such a flat and highly centralized hierarchy, with troops in the field linked directly to the most senior headquarters element, characterized the combat organization of the Marine Corps' 1996 HUNTER WARRIOR Advanced Warfighting Experiment.[23] In that exercise, removal of the middle layers of command brought faster response and more efficient allocation of ordnance; but it also resulted in the physical removal of company and battalion officers and noncommissioned officers from command positions and their relocation to rear areas far from the battlefield—a significant change in the traditional concept of combat leadership.[24] Although perhaps not indicative of future Marine combat organizations, the HUNTER WARRIOR experience nevertheless suggests that networked combat certainly offers no promise of "empowerment" of company-grade officers.[25]

Automating Human Functions for Speed. A second approach to increasing the tempo of operations is through the expansion of machine automation of command functions—substituting computers for as many human decision makers as possible. Satellite communications have already made commonplace the automated exchange of tactical information between widely dispersed units. Emerging concepts like the Navy's Cooperative Engagement Capability (CEC) and the "Ring of Fire"—real-time networks of the sensors and weapons of ships, aircraft, and units ashore for integrated target engagement—hold out the prospect of future theater-wide architectures conducting operations "via a distributed, automatically self-configuring network."[26] Such systems will rely on computer algorithms rather than human planners to position the units in the network and to employ individual sensors and weapons of each. This may eventually lead to fully automated, joint force rules of engagement—one of the explicit goals of the proposed global system of systems architecture to support "Joint Vision 2010."[27] Thus in future combat situations, a networked computer rather than a human being may well be "deciding" where a unit is to locate itself, when it is to shoot, and at what. Moreover, the inherent logic of networks argues for systems without a designated central control point, and to the extent

that theoretical goal is achieved it may become unclear to individual commanding officers who or what is exercising authority over their units' operations and weapons at any given time.

Moving from Protracted Attrition Warfare to High-Speed Precision Warfare. Emerging information technologies are making possible increasingly "smart" weapons that can locate and strike specific targets over virtually unlimited ranges. The transition from a "dumb" to a "smart" arsenal has prompted efforts to shift in general from mass application of force against very large and indiscriminate target sets, to precise delivery against critical system nodes. The idea is to halt an invasion by destroying the critical bridge or fuel truck instead of trying to attack all of the enemy's armored vehicles, or to take down an air defense grid by striking the critical power transformer rather than many individual missile sites. Some even postulate that strategic leverage might be achieved by destroying the critical points that sustain a nation's political, military, and economic systems.[28] The conceptual goal is "one target, one weapon," against the smallest possible number of critical targets, so as to achieve the objective with minimal cost, risk, death, destruction, collateral damage, and ordnance expenditure.[29]

The expectation of a high probability of kill per weapon is a fundamental assumption behind the continued U.S. reliance on aircraft delivery of ordnance, with its associated low salvo rates, rather than movement toward a large arsenal of fully autonomous, long-range missiles.[30] But this deprecation of attrition warfare, using large numbers of cheap weapons, in favor of precision warfare reliant upon a much smaller number of very accurate but comparatively expensive weapons will also mean a rapidly decreasing tolerance for ordnance expenditure that achieves no effect.[31] Ordnance conservation will likely be a major consideration for a commander who must also plan for unidentified future contingencies, which might arise quite rapidly and have far more strategic importance than the present conflict. Thus as individual troops may be increasingly empowered with information on enemy targets and own force assets, they may be denied the "ordnance on demand" needed to act on that knowledge—because the selection of targets must be reserved to higher authority.[32]

The result is likely to be a highly centralized planning *and* execution process like that evident in HUNTER WARRIOR, where individual field troops were essentially reduced to passive battlefield sensors directly supporting a single ordnance-allocation authority. Recent war games have surfaced the possibility that relative ordnance scarcity may oblige future theater commanders to withhold authority from local commanding officers even to expend their own weapons in unit self-defense—surely one of the most jealously guarded prerogatives of "command."[33]

Automating for Efficiency. Speed of command and ever-increasing force precision are not the only goals likely to drive command centralization and the loss of authority on the battlefield. In addition, the quest for reduction in military operating costs is stimulating efforts to increase systems reliability in order to reduce equipment downtime and maintenance expenses. There are proposals to exploit increasing bandwidth to create real-time logistics reporting networks. These would use microsensors embedded in key equipment components to provide continuous and automatic status reports directly to distant, senior maintenance authorities and also the civilian manufacturers of the equipment. The idea is that such rapid, automated data will improve reliability through real-time operational-performance analysis, greatly reduce the time required for repair by automating the process of obtaining spare parts and technical assistance, and eventually reduce the number of uniformed personnel devoted to forward maintenance and repair. However, an automated reporting network would also tell remote authorities as much if not more about a unit's material status than the commanding officer knows him or herself. It would eventually allow the automated generation of unit equipment casualty reports, at which point distant commanders will have effectively assumed the authority of on-scene commanding officers for determining a unit's operational and material readiness.

Knowledge Enables Control. It was the inability of leaders at geographically distant command posts (to which they were obliged to withdraw when armies and fleets grew too large to lead personally in combat) that originally demanded delegation of both command authority and responsibility to junior subordinates. In the future, however, information technologies may allow senior commanders to know much more about distant situations—perhaps even more than those on the scene, thanks to multisource information fusion. There is no reason to expect that they will be able or willing to avoid involving themselves in actions taken by their subordinates, of whose circumstances they will believe they have full knowledge.

Today the assumption of direct control over lower-echelon activity is commonly derided as unwarranted "dabbl[ing] in . . . subordinates' business."[34] Some contemporary junior officers express fear that better information will tempt senior commanders to "interfere in lower-echelon decisions," leading to situations that will "compromise initiative and undermine the effectiveness of command" and violate a "principal tenet of command."[35] But in fact decentralization of execution may simply be an artifact of pre-network, low-data-rate operations. The likelihood that greater experience and knowledge will reside at higher command echelons would seem to argue for centralizing decision making and control to the fullest extent allowed by communications capacity.[36]

Moreover, future knowledge-empowered commanders are likely to find it ethically unacceptable to absolve themselves of accountability for lower-level actions of which they have full knowledge and control, and for which they are ultimately responsible.

There may be still other cultural impacts of organizational changes to exploit information technologies. For example, as networks extend themselves over greater spatial expanses they will undoubtedly reach across the boundaries that have traditionally separated ground, sea, and air environments. System function will likely become more important than service affiliation, blurring the distinction between Army, Navy, Air Force, and Marine Corps authority on the battlefield. Also, the transition from platform-centric to network-centric warfare suggests to some the emergence of an entirely new warfare area—and thus a need to create new network warfare management specialties on a par with those of armor, aviation, submarines, etc. If so, it will mean entirely new criteria for both promotion and command, affecting a large group of officers. Without an increase in the number of officers in the senior ranks, many of those in traditional warfare areas may find themselves increasingly uncompetitive for promotion and command opportunity as a result of then-promising career choices made years before.[37]

Preparing for a Different Future

Certainly, future technological realities may fall far short of current expectations. Despite today's apparent trends, transmission bandwidth and automated data processing capacities may never catch up with network demand, and increasing dependence upon satellites—especially commercial communications satellites—may be seen as an unacceptable wartime vulnerability. Nevertheless, the U.S. military's embrace of network warfare as a primary goal for the future begs a commensurate effort to understand its organizational and cultural implications. Historically, organizational changes of the magnitude suggested by the now-emerging information technologies have taken decades to implement—time for a new generation of officers less wedded to existing cultural norms to rise to positions of leadership within the military services.[38] If the level of organizational change suggested by network warfare is in the best interest of the U.S. military, then it would be wise to institutionalize processes that allow the commensurate cultural change to proceed at a rate that keeps pace with advancing technology.

The most important institutional initiatives will probably be those that stimulate as many officers as possible to think about different operational and organizational concepts, and that accustom the broad society of officers in all

services to the likelihood that their profession will undergo major changes during the courses of their own careers. The service and joint war colleges may be best positioned to take on this challenge, through their core curricula and directed research.[39] These institutions have a unique opportunity to capture most of the best junior and senior officers and offer them both the intellectual stimulation and the time to think seriously and critically about different kinds of future military organizations and service cultures.

Perhaps the most important reason for stimulating serious thinking about the prospect of major change is that doing so will help determine whether current future-warfare goals are in fact to the relative advantage of the U.S. military over the long run. There has been speculation, but little open debate, about possible risks associated with network warfare, and specifically whether an ever-increasing tempo of operations may perhaps be fraught with more operational peril than benefit for the United States.[40] An equally important question is whether the cultural changes that seem to be required to exploit future information technologies will actually prove to be so detrimental to the ethos necessary to a successful military organization as to offset any operational advantages. Alfred Thayer Mahan originally opposed the construction of dreadnought-type battleships for the U.S. fleet because he feared that having only long-range guns would foster in the U.S. sailor an "indisposition to close" with the enemy, thus undermining the courage of the naval commander. As Elting Morison observed, the long-range battle did not cause sailors to lose their bravery but rather to "reveal their bravery in a different way."[41] However, Mahan's concern should not be too readily dismissed as we ponder our future technological options. It is possible that emerging information technology may indeed allow military leadership to become too remote, too automated, and too detached—and for military organizations to become too diffuse to maintain the unit cohesion necessary to stand in conditions of prolonged combat and severe hardship. These may be the issues most deserving of our careful consideration, before rapidly evolving technologies draw us too far down the path of organizational and cultural change.

Notes

1. The past several years have witnessed truly significant increases in satellite bandwidth available to major afloat platforms through expanded use of leased commercial satellites. Programs like Challenge Athena and GBS (Global Broadcast Service) have increased the send and receive capacities for aircraft carriers and command ships from thousands of bits per second to millions. The expanding number of commercial satellites, coupled with continued reduction in antenna size, is expected to make such communications capacities available to ever-smaller units both afloat and ashore. There is at least the possibility that transmit/receive capacities will exceed both commercial and military demand in the foreseeable future (admittedly a long-promised but yet-to-be-achieved goal).

2. See for example, William A. Owens [Adm., USN], "The Emerging System of Systems," U.S. Naval Institute *Proceedings* (May 1995), and Arthur K. Cebrowski [VAdm., USN] and John J. Garstka, "Network-Centric Warfare: Its Origin and Future," U.S. Naval Institute *Proceedings*, January 1998, pp. 28–35.

3. William S. Cohen, *Report of the Quadrennial Defense Review* (Washington, D.C.: May 1997), pp. 39–40, 42–3; "Joint Vision 2010" (Washington, D.C.: Office of the Chairman of the Joint Chiefs of Staff, July 1996), p. 21; and Cebrowski.

4. Cebrowski.

5. Ibid., p. 32.

6. See for example Emmett Paige, Jr. (Assistant Secretary of Defense [Command, Control, Communications, and Intelligence]), "Achieving the Integrated Systems Concept," address at the Armed Forces Communications and Electronics Association (AFCEA) International Technet '96 Convention, 4 June 1996 (published in *Defense Issues,* vol. 11, no. 51); Joseph S. Nye and William A. Owens, "America's Information Edge," *Foreign Affairs* (March/April 1996), pp. 20–36; and Cebrowski, p. 32.

7. Elting E. Morison, *Men, Machines, and Modern Times* (Cambridge, Mass.: MIT Press, 1966), pp. 17–44.

8. Although the adoption of wireless affected all service cultures, the experience of the Navy is emphasized here because wireless equipment proved practical for ship installation long before it could be widely utilized by mobile ground vehicles or by aircraft. Moreover, the subsequent diminution of command authority brought about by wireless appears to have been much more marked in the Navy than the other services. Today, however, the reduction in size of equipment and power sources suggests that future information systems are not likely to favor shipboard introduction over ground and air platforms.

9. This exception was Howe's victory of the Glorious First of June in 1794, which took place about five hundred miles west of Brest, France. See Karl Lautenschlager, "Technology and the Evolution of Naval Warfare," *International Security* (Fall 1983), p. 13.

10. In 1911 the U.S. Navy was still using only one frequency for transmission and reception. By contrast the Royal Navy had been using eight or more frequencies since 1907, the Germans four, and the Japanese and Italians three. Arthur Hezlet, *Electronics and Sea Power* (New York: Stein and Day, 1975), p. 75.

11. For instance, Commander Bradley Fiske, one of the Navy's foremost technical authorities, asked whether "the very convenience of [radio's] use in peace betray us into the pernicious habit of handling our warfleet in peace by a means that would prove worthless in war?" Bradley A. Fiske, "War Signals," *Proceedings* of the U.S. Naval Institute (December 1903), p. 932.

12. Susan J. Douglas, "Technological Innovation and Organizational Change: The Navy's Adoption of Radio, 1899–1919," in *Military Enterprise and Technological Change,* ed. Merritt Roe Smith (Cambridge, Mass.: MIT Press, 1985).

13. The concept of the line as the "corps of command" was a common theme of traditionalists during the acrimonious amalgamation of the line and the staff engineers, which was in progress when wireless arrived in the fleet. See, for example, "Navy Line and Staff," *Army and Navy Journal,* 3 October 1896, p. 69. The organizational demands of radio presented the second major cultural challenge to the line within a generation.

14. "Wireless Control of the Fleets," *Army and Navy Journal,* 9 May 1908, p. 965.

15. Ibid.

16. Hezlet, p. 66.

17. Studies of innovation in the military indicate a common pattern for these key individuals: junior officers willing to promote seemingly radical ideas even at the risk of their professional careers, coupled with senior officers who promote the innovations and protect the innovators. See Vincent Davis, *The Politics of Innovation: Patterns of Navy Cases* (Denver, Colo.: Univ. of Denver Press, 1966–1967); and Stephen Peter Rosen, *Winning the Next War: Innovation and the Modern Military* (Ithaca, N.Y.: Cornell Univ. Press, 1991). The impetus for effective wireless organization in the U.S. fleet resulted largely from the fortunate pairing of Lieutenant Stanford C. Hooper (the so-called "father of naval radio") with Rear Admiral Charles J. Badger (then commander in chief of the Atlantic Fleet). See Douglas, pp. 155–65.

18. Douglas, p. 148. Until quite recently, ships at sea were primarily dependent upon 75 baud, hundred-word-per-minute high-frequency circuits for long-range communications. The arrival of satellite communication in the 1970s greatly increased wireless range and reliability and capacity, but bandwidth available to individual ships still remains short of the growing demand.

19. "Joint Vision 2010," p. 13.

20. Director of Command, Control, Communications, and Computers (Joint Staff) and Director, Defense Research and Engineering (Office of the Secretary of Defense), *Advanced Battlespace Information System (ABIS) Task Force Report: Executive Summary* (Washington, D.C.: May 1996).

21. It is not clear what level of operational tempo will be considered "fast enough," but stated goals envision expected changes of orders of magnitude. For instance, a senior Defense official called for an intelligence process that would deliver "real-time targeting to weapons systems in seconds (not hours)" (Paul G. Kaminski, Under Secretary of Defense for Acquisition and Technology, "Enabling Intelligence Technologies for the 21st Century," Statement before the House Permanent Select Committee on Intelligence, 18 October 1995). The former Chief of Staff of the Air Force has spoken of future air power perhaps being able

to "engage 1500 targets within . . . the first *minutes* of a conflict" (Ronald R. Fogleman [Gen. USAF], "Air and Space Power in the 21st Century," Ira C. Eaker Lecture, U.S. Air Force Academy, 6 April 1995). The Navy's Director for Space, Information Warfare, Command and Control (N6) has articulated a requirement that the Navy be able to deliver supporting fires to the Marines in "about two minutes" (Richard Lardner, "Cebrowski Urges Shift to 'Network Centric Warfare,'" *Defense Information and Electronics Report*, 20 June 1997).

22. Of course another option is artificial human-performance enhancement. Various pharmacological, enzymatic, and genetic approaches have been proposed to achieve such goals as increased human resistance to information overload, modification of the sleep-wake cycle, extension of the period of maximum human performance, and direct machine control by neural impulses. However, uncertainties associated with human response to such efforts, coupled with ethical qualms within the United States about manipulating the human brain, make these unlikely options for the U.S. military.

23. HUNTER WARRIOR culminated the first phase of the Marine Corps's five-year "Sea Dragoo" program.

24. An observer noted that the company-grade officers affected were "greatly disturbed" by this change. Jon R. Anderson, "Praise & Contempt," *Navy Times*, 18 August 1997.

25. A recent series of Navy war games exploring combat organizational structures in the year 2020 suggests that future commanders may demand that organizations be very flexible, with a capacity to be either flat or hierarchical, centralized or decentralized, depending upon the specific situation. For example, the game players revealed a preference for decentralization of authority during peacetime operations (including military operations other than war) but for centralized command in combat. Moreover, players favored a two-tier arrangement during wartime, with "local commanders . . . given defensive freedom of action, while offensive operations remained tightly regulated, specified, and directed." See Edward S. Smith, Jr. [Capt., USN], "The Navy RMA War Game Series: April 1995–November 1996," *Naval War College Review*, Autumn 1997, p. 28.

26. Dean Barsaleau, "CEC: The Unprecedented Force Multiplier," *Surface Warfare* (September/October 1994), p. 26. CEC is an area air-defense concept linking sea, shore, and air-based sensors and weapons in a common network. "Ring of Fire" is a surface fire-support concept tested during fleet battle experiments in 1997; it features automated integration of multiple fire-support assets into a common network.

27. *ABIS Task Force Report: Executive Summary.*

28. See, for example, John A. Warden [Col., USAF], "The Enemy as a System," in Air Command and Staff College, *Concepts in Airpower for the Campaign Planner* (Maxwell AFB, Ala.: 1993), pp. 5–27. U.S. doctrine does not yet embrace "nodal" warfare but does hold the application of "precise force to achieve the desired effects" as its conceptual goal. See Commander, Joint Warfighting Center, *Concepts for Future Joint Operations: Expanding Joint Vision 2010* (Fort Monroe, Va.: May 1997), p. 52.

29. Kaminski, p. 2; and *Concepts for Future Joint Operations*.

30. The United States is building up to a planned inventory of more than three hundred thousand precision guided munitions; however, only a few thousand of these will not be dependent upon aircraft delivery (U.S. General Accounting Office, *Weapons Acquisition: Precision Guided Munitions in Inventory, Production, and Development* [Washington, D.C.: June 1995]).

31. The average cost of each of the more than two hundred thousand general-purpose bombs dropped in Operation DESERT STORM was about $2,000, compared with more than $1.1 million each for the 333 sea and air-delivered cruise missiles that were expended (Office of the Secretary of the Air Force, *Gulf War Air Power Survey*, vol. 5 [Washington, D.C.: 1993], p. 581). There are plans to produce lower-cost long-range ordnance, but individual stand-off and long-range missiles will still be priced in the neighborhood of from $500,000 to $750,000 each.

32. This resource-demand mismatch has long been characteristic of the Navy's Composite Warfare Commander (CWC) organization, introduced in the early 1980s to enable a more rapid command cycle through distributed decision making. In practice, a multithreat environment commonly so accelerates demand for scarce assets that resource allocation decisions—especially for multipurpose ships and aircraft—are routinely elevated to the battle group commander.

33. In a 1995 Joint Staff–sponsored war game, a centralized theater commander saw his resource deficiency as so acute that he assumed the authority to determine when his subordinate ship commanders could fire long-range surface-to-air missiles in self-defense. Reminiscent of the early days of wireless, one Aegis "commanding officer" openly threatened to withdraw his unit from the theater-wide defense network if his prerogative to fire in self-defense were taken away.

34. Eliot A. Cohen, "A Revolution in Warfare," *Foreign Affairs* (March/April 1996), p. 50.

35. Jeffrey A. Harley [LCdr., USN], "Information, Technology, and the Center of Gravity," *Naval War College Review*, Winter 1997, pp. 83–4.

36. However, the migration of battlefield decision-making authority to ever higher echelons raises the critical question of how the military is to create competent senior battlefield leaders in the future if junior

officers are trained to expect and rely on continuous direction from above. An expanded use of realistic battlefield simulations for officer training may be one approach.

37. Some have proposed the creation of a dedicated "information corps"; see, for example, Martin C. Libicki and James A. Hazlett, "Do We Need an Information Corps?" *Joint Force Quarterly*, Autumn 1993. But critics have pointed out that it may make no more sense to establish an information corps today than it would have to create an "internal combustion corps" at the turn of the century. New career paths and specialties then arose around applications of this engine technology—for example, armor and aviation—rather than the power plant itself. The U.S. Navy's exploitation of wireless depended heavily on the creation of the radio officer billet on afloat platforms in 1912 (Douglas, p. 159) and recognition of that billet by senior officers as career enhancing. The radio officer, however, was created within the existing warfare specialties, not as a new warfare area. Nevertheless, continued exploration of a separate network warfare specialty on a par with the existing platform-centered ones needs to be part of an innovation process.

38. This is evident in Susan Douglas's study of the Navy's exploitation of wireless and is an explicit conclusion of Stephen Rosen's noteworthy analysis of military innovation (*Winning the Next War*).

39. The idea of continuous military innovation and periodic "revolutions in military affairs," although seemingly well grounded in history, is not institutionalized in either the curricula or research efforts of any of the war colleges. While these institutions seem to have served as something of a breeding ground for innovative thinkers during the interwar period, some critics argue that the war colleges have since taken on the role of preservers of the status quo rather than agents of innovation and change.

40. See, for example, James R. FitzSimonds, "The Coming Military Revolution: Opportunities and Risks," *Parameters*, Summer 1995, pp. 30–6.

41. Morison, p. 35.

Ψ

U.S. Grand Strategy
Mission Impossible

Robert Jervis

ON 1 MAY 1919, THE ACTING SECRETARY OF THE NAVY, Franklin D. Roosevelt, wrote the Secretary of State as follows:

> It is a fundamental principle that the foreign policy of our government is in the hands of the State Department. . . . As it is upon our foreign policy that naval estimates must be based, it will be recognized that the Navy Department has a vital interest in this question. It is probable that certain policies are of such importance to our national interests that they must be defended at all costs. On the other hand certain policies are not, by the expense they would entail, justified if they lead to war. Hence. . . . it is necessary for the Navy Department to know what policies it may be called upon to uphold by force, in order to formulate plans and building programs.[1]

In May 1940, the United States Chief of Naval Operations wrote the commander of the Pacific Fleet:

> Suppose the Japs do go into the [Dutch] East Indies [without simultaneously attacking United States territory]? What are we going to do about it? My answer is, I don't know and I think there is nobody on God's green earth who can tell you.[2]

Grand Strategy without an Enemy?

Leaders of military organizations always ask Roosevelt's question, but as he learned when he was president if not before, it is not easy to answer. Under

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current circumstances it is impossible. To make the point more broadly, it will not be possible for the United States to develop and follow a coherent grand strategy over the next decade or so. Fortunately, one is not needed, although its absence will annoy scholars, confuse other countries, and make military planning extremely difficult.

The reason why the United States will not develop a grand strategy is the same reason why one is not necessary: the current world, like the one the nation lived in before the invention of heavy bombers, presents no pressing threats. But it is unlike the earlier eras in that the United States now has less-than-vital interests throughout the world, sufficient power to act on more than a few of them, and an activist ideology (as some would put it, a conscience, or as others would say, the belief that it has the right and indeed the obligation to try to improve the world).

This is then truly a new world, one that is unusual for statesmen and scholars alike. For many of them, especially if they belong to the Realist school, the external world that states inhabit is a very dangerous one.[3] States need to defend their security interests, and these are always potentially if not actually at risk—a situation Arnold Wolfers analogizes to a house on fire.[4] Under such circumstances, all states must obey the imperatives of the international system. This means that domestic politics does not enter in, that all states will behave the same way under the same circumstances regardless of their inrernal features (for instance, democracies react as dictatorships do), that democratic control of foreign policy has little meaning, and that morality can play no role, because there is little room for choice. Whether or not this is ever an accurate description has been heatedly debated, a debate that is irrelevant here, because no one would claim that this describes the world the United States now inhabits and shapes. The central implication here is that the United States now has unusual freedom of action. Of course, this is what statesmen often dream about. But we should not forget the old saying: "Be careful what you dream for, because you may get it."

The most vital interest of any country is security from invasion or attack. The second-most-vital interest, often linked to it, is the ability to protect the state's closest allies, who may be valuable because they contribute to the state's security or because they are valued in their own right. A third interest is in economic prosperity, which both contributes to security and is a goal in itself. Almost all analysts agree that these three core values are now available to the United States for free—that is, they do not require strenuous efforts, partly because of nuclear weapons.[5] Indeed, not only are there no plausible direct threats to American security, but Western Europe similarly lacks such threats. Those countries constitute what Karl Deutsch called a "security community,"

which means that they do not menace each other;[6] there is little reason to fear the development of extreme economic conflict between these countries and the United States. This now appears to be true for Japan as well, contrary to the alarmist claims that were common a few years ago. It is as certain as anything can be in international politics that the United States will not fight a war with the states of Western Europe, or Japan. This is a truly revolutionary change in world politics: there has never been an era in which the major powers have not periodically fought each other. We simply do not know what a world will be like in which this threat has been lifted.[7]

One can, of course, conjure up all sorts of threats, such as a resurgent Russia, a belligerent China that continues economic growth at 10 percent a year, or terrorism. It would take extremely lengthy analysis to rebut each of these claims, and I will be content to assert that they largely represent the political and psychological need to find dangers.[8]

Multiple, But Secondary, Goals

Security threats to the United States, then, are largely absent;[9] that does not mean, however, that it has no foreign policy goals. Indeed, there are many secondary threats worth worrying about and secondary values worth pursuing, and doing so is feasible because of America's great power. But it is the very fact that many goals can be pursued while none are primary that generates the current debate. During the Cold War, to be sure, arguments over strategy were fierce, but they largely involved assessments of the Soviet Union. Some of today's arguments turn partly on assessments of the international environment, but most relate to what the United States values, the prices and risks it should be willing to pay to reach alternative goals, and the priorities of domestic and international objectives.[10] In this environment of greatly reduced threat, people focus on dangers that are less extreme or less plausible. By definition, policy makers and military planners concentrate on threats according to some combination of the likelihood that they will materialize and the menace that they will constitute if they do so. But it is harder than ever to see how one particular unlikely threat (for example, rogue states) compares to another (say, China) on these dimensions. Indeed, perhaps threats of a very different kind deserve greatest attention, as environmentalists, for example, claim. Of course this plethora of remote but equally plausible menaces would not be a problem if the grand strategy designed to deal with one of them suited the others as well. But only those who believe in a deity would expect such a happy coincidence.

Life is both more pleasant and more complicated when there are no threats that are both dangerous and likely. I believe that this is clearly the case today. For example, look at what one typical commission has designated as American

vital interests ("vital national interests" being in its view "conditions that are strictly necessary to safeguard and enhance the well-being of Americans in a free and secure nation"):

- Prevent, deter, and reduce the threat of nuclear, biological, and chemical weapons attack on the United States.
- Prevent the emergence of a hostile hegemon in Europe or Asia.
- Prevent the emergence of a hostile major power on U.S. borders or in control of the seas.
- Prevent the catastrophic collapse of major global systems: trade, financial markets, supplies of energy, or environmental.
- Ensure the survival of U.S. allies.[11]

Not only are all these threats vague or unlikely to materialize, but it is hard to see how we would go about estimating, even roughly, how probable each is. Yet in order to know what resources we should devote to preventing or coping with them, we would need to do this. Bernard Brodie, justifiably known as the dean of American strategists, noted:

> All sorts of notions and propositions are churned out, and often presented for consideration with the prefatory words: "It is conceivable that. . . ." Such words establish their own truth, for the fact that someone has conceived of whatever proposition follows is enough to establish that it is conceivable. Whether it is worth a second thought, however, is another matter.[12]

In previous eras, decision makers were often willing to say that certain eventualities that would be deeply disturbing if they arose were unlikely enough to be dismissed out of hand. Thus in 1924 Winston Churchill opposed the Admiralty's argument that more ships had to be built to meet the menace from Japan: "A war with Japan! But why should there be a war with Japan? I do not believe there is the slightest chance of it in our lifetime."[13] Of course these judgments can be wrong, as this one was. But they are both necessary and difficult to make in an era when no threat is salient and pressing. We may be able to make rough judgments of probability of dangers and events as being "very probable," "probable," or "improbable." But it is extremely difficult to distinguish among the "improbable," the "very improbable," and the "very, very improbable."

At least as troublesome, it is difficult to develop intelligent policy prescriptions for distant and unlikely threats, because with them we are dealing with so many unknowns. Take the first vital interest on the list above. How do we go about establishing a grand strategy for "preventing, deterring and reducing the threat of nuclear, biological, and chemical weapons attacks on the United States" unless

we know something about the countries that might menace us and the circumstances under which the danger might arise? Of course in the past it was not easy to see how to diminish and protect against possible threats, as the debates before the two world wars and during the Cold War remind us. But at least there was a fairly small set of well-defined issues that needed to be analyzed in order to produce guidance. Difficult as it was to analyze Soviet intentions, that question was easy and well structured compared to estimating whether the People's Republic of China is likely to be a major threat ten or twenty years from now. Unless one believes in deterministic theories of history (for instance: countries with rapidly increasing economies will expand until they meet a superior power; the Chinese, because of their history and culture, see themselves as the "Middle Kingdom" and so seek to dominate the barbarians; the center of world power has shifted from Europe to Asia), one needs to examine a large number of pathways by which China might become dangerous, and for each one to estimate the likelihood that a proposed policy would be effective, ineffective, or misguided. Unfortunately, the world is sufficiently complex and perverse that a policy that would discourage and deter China under one set of circumstances could exacerbate the danger under another, thus ruling out any single prescription.

This more relaxed environment creates greater room than there used to be not only for differences of opinion over what policy to pursue but for the splintering of opinion into unstable segments. In the absence of a clear danger, let alone a clear and present one, our external environment does not require that we be guided in all contingencies by one set of values rather than another. There is always agreement that the protection of the country comes first, but after that, consensus breaks down, which is hardly surprising. Individuals and groups vary widely in the priority they give to self-interest as opposed to altruism (or to put it slightly differently, in how narrowly or broadly they construe self-interest) as well as in how they see their own interests and in the values they seek for themselves aud others. Thus some people give economic interests pride of place; others believe that the United States should give priority to enhancing human rights around the world; while others believe that a crucial part of the national interest is aiding the countries to which they have ethnic or ideological ties. Still others focus on threats, but not on the same ones: some fear Russia, others worry about China, while others believe that the most pressing danger is proliferation in general, or specific countries getting nuclear weapons. Of course it is not news that the national interest is not entirely objective or that it can be composed of incompatible or conflicting parts. But in the current era, the lack of a plausible candidate for a single unifying value or a motive that should animate all American foreign policy greatly magnifies the difficulties of creating a coherent grand strategy.

Pluralism with a Vengeance

What we are likely to see, then, is quite familiar to students of American domestic policy—because neither any one interest nor the state itself is strong enough to impose coherent and consistent guidance, courses of action will be shaped less by a grand design than by the pulling and hauling of various interests, ideas, and political calculations. This is the model of pluralism, which although often criticized normatively or descriptively, is believed by most scholars to capture a great deal of American politics.[14] Furthermore, it is commonly argued that pluralism not only preserves individual liberties and ensures that each group gains at least some of the values about which it cares most but is likely to produce a better overall policy than could be arrived at by a central authority seeking a synthesis of the public interest.[15]

During the Cold War, however, Realists argued that the national interest abroad, unlike the public interest at home, is not chimerical, because the external environment is sufficiently compelling to override many domestic differences and enable even a relatively weak state to follow a policy of some coherence.[16] The argument that the United States can now adopt a grand strategy rests on the similar notion that it needs and has sufficient unity of interest, purpose, and government structures to allow the national interest model to hold. Whatever the virtues of this in normative terms—and I might debate but certainly not dismiss it—I see no reason to expect this to describe the future. Instead, I think the pluralist model offers much more guidance.

Henry Kissinger argues that "a conceptual framework . . . is an essential tool [of foreign policy. Its] absence . . . produces exactly the opposite of freedom of action; policy makers are forced to respond to parochial interests, buffeted by pressures without a fixed compass."[17] But that any individual or group has such a framework is not sufficient to protect it against the danger that Kissinger foresees; rather, there must be widespread agreement on it. Indeed, it was the inability of domestic leaders to maintain such an agreement in the wake of Vietnam and Watergate that Kissinger claims destroyed his policy. That the argument is self-serving does not mean it is entirely incorrect. In any event, the history of the 1970s does remind us of both the importance and the difficulty of gaining domestic support.[18]

"All politics is local," Tip O'Neill* famously remarked. Students of foreign policy are offended by this notion—surely, they insist, the nation's security and other vital interests are too important to be at the mercy of conflicting values, parochial interests, and partisan politics.[19] In July 1997 the Senate voted

* Thomas Phillip O'Neill, Jr. (1912–1994), U.S. representative (Democrat) from Massachusetts, 1953–1987.

overwhelmingly to delay the next two rounds of military base closings until it received a study of the "economic effects of past and future shut-downs. By voting as it did the Senate ignored the wishes of President [William J.] Clinton and military leaders who have argued that the closings—of bases still to be determined—were central to their efforts to pare the Defense Department budget and allow military officials to shift money from military operations to weapons systems."[20] Of course the location of military bases is the aspect of security policy that has always been most influenced by local and partisan politics, for the obvious reason that the ratio between domestic impact and foreign policy importance in that realm is so skewed toward the former. But in the post–Cold War world, this will characterize most foreign policy issues.

Three months earlier, the *New York Times* carried a story that may have been equally revealing, if inadvertently so. Indeed, it was only a photograph: the new F-22 fighter plane being rolled out of the Lockheed-Martin plant in Marietta, Georgia. In addition to a stylized American flag, the airplane bore the painted slogan "Spirit of America."[21] Because the military rationale for the expensive, advanced aircraft is quite unpersuasive, "Spirit of America" is best translated not as the historic American commitment to defend itself, let alone to drop bombs on small countries, but by another slogan: "The business of America is business." Of course military procurement policy has always been strongly affected by the domestic political economy, but with the declining persuasiveness of the foreign policy arguments for particular weapons, the influence of local economic pressures is certain to increase.[22]

The broader argument for the rise of American economic diplomacy hardly needs rehearsing here. Although since Ron Brown's death* American economic salesmanship abroad has not been so flamboyant, the basic point remains that when the most important foreign policy objective of security has been reached or is indeterminate, other goals will come to the fore. To take the most obvious example, it is then not surprising that American policy toward China, right or wrong, is driven much more by economic concerns than by the belief that levying trade sanctions would aggravate Chinese aggressiveness or compound human rights violations.

Yet even if economic objectives were not only of increased importance but were dominant, it still would not be easy to develop a coherent American grand strategy: economic interests are not united. Importers often have different

* Ronald H. Brown (1942–1996), Secretary of Commerce and former Chairman of the National Democratic (Party) Committee, killed in the crash of a U.S. Air Force transport near Dubrovnik, Croatia, on 3 April 1996, along with a party of thirty-two U.S. government officials and senior business executives. The group was touring Croatia and Bosnia-Herzegovina in order to encourage postwar reconstruction contracts for U.S. companies.

interests from exporters; one state or congressional district has economic stakes that conflict with those of others; different sectors in the economy—and perhaps different classes—have diverging interests. A strong executive branch or a corporatist political structure might be able to weld these interests together, but the United States lacks both.[23] Similarly, a small country whose prosperity depends on trade may behave coherently, especially if it elects its officials by proportional representation.[24] Again, the description does not fit the United States. Our system of separation of powers, an unruly executive branch, and the dependence of political parties on corporate and union money means that private interests have extraordinary access. Furthermore, the fragmentation creates multiple arenas for political struggles, which means that one group, interest, or ideology can prevail on one issue or in one instance but not in others. No more than it can adopt a coherent "industrial policy" is the United States likely to follow the sort of coherent economic foreign policy that could both support and require a grand strategy.

This is not to imply that economic considerations—conflicting or not—should dominate American foreign policy. Indeed, I think that conventional wisdom has tended to oversell the extent to which economics will dominate the post–Cold War era. Although it is easy to display some very large figures for the amount of trade, investment, or financial exchanges the United States engages in, it is far from clear how much these will be affected by foreign policy. A major war involving one of our main trading partners would deeply affect the American economy, but many of the main international factors that structure our economic well-being seem quite firmly established. Of course, our ability to lower trade barriers with specific countries, especially in Asia, can be affected by the policies that we choose, and these can reciprocally affect whether those countries buy such items as airplanes and advanced telecommunications systems from us or the Europeans. But in the context of a multitrillion-dollar economy the impact of these cases is not great. Now that the vogue for strategic trade theory has passed, it is easier to see that the main determinants of the health of the American economy are internal.[25] Nevertheless, the decline in military threats automatically elevates the relative standing of economic goals.

Although economic considerations will play a large role, especially when the economic stakes are high, they do not have the field to themselves. To say that security interests are not pressing does not mean they are completely absent; to argue, as I did earlier, that potential threats like proliferation do not readily lend themselves to a judgment as to their magnitude or the policies that will best combat them does not mean that people will not or should not argue for dealing with them. In addition, humanitarian or altruistic values are strongly held in American society. Indeed, I doubt whether the policy of containment would have had as much public support were it not for the fact that people believed

that keeping other countries noncommunist not only bolstered American security but was good for the world. Similarly, the current policy of supporting emerging democracies is fed by the argument that this will improve the lives of the people in those countries in addition to making other nations, including the United States, safer and more prosperous. In other cases humanitarian motives are the main ones at work, as in what support there was for the intervention in Somalia. Realists may decry such motives and argue they will entangle the United States in unnecessary quarrels without necessarily helping others, but it is hard to understand American foreign policy in the past or predict it in the future without taking account of such motives. What is crucial here, however, is not that these impulses cannot be ignored but that they are too weak and unfocused to direct policy over a significant period of time and wide geographic areas. They will wax and wane according to circumstances and the public mood, and they will be intensified and brought to bear by particularly visible and outrageous atrocities. They are strong enough to contest with other values without being able to dominate.

Finally, American foreign policy will be influenced by those who favor their co-ethnics abroad. Again, this is not a new phenomenon; the role of the Irish and German-Americans in earlier periods comes to mind. More recently, the American "tilt" toward Greece in its disputes with Turkey cannot be understood apart from the fact that Americans of Greek (and Armenian) descent vastly outnumber those who came from Turkey. Realists again are horrified by these influences; the textbooks are so embarrassed by them that they give them no acknowledgment. But I see no reason to reject these ties as a valid part of the national interest of a multiethnic country. Furthermore, while observers like Samuel Huntington see internal developments within the United States as dangerously approximating the external "clash of civilizations," it may well be that only a multiethnic country can operate effectively in a diverse world.[26] In addition, various ethnic groups within the United States can form bridges to their co-ethnics abroad.[27] But the main point here is that legitimate or illegitimate, dangerous or helpful, ethnic considerations are going to play a role in American foreign policy.

It was only the Cold War that held pluralism in check. A longer historical perspective reminds us of the difficulties states have had in constructing a coherent and stable foreign policy when the interests within them have been powerful and conflicting. Now it is all the rage to argue that democracies not only do not fight each other but are also especially able to commit themselves to courses of action;[28] in the nineteenth century conventional wisdom held to the contrary, that democracies, being under the sway of unstable public opinion, could not be counted upon to carry out threats or promises. Before World War I it was not entirely disingenuous of British statesmen to tell both France and

Germany that Whitehall could not make firm commitments as to the conditions under which Britain would fight a war on the Continent—because the decision would have to be made through democratic processes which, being responsive to public attitudes, would be influenced by the details of the situation that actually arose rather than be determined by more general and hypothetical questions. This kind of constraint was more the rule than the exception in earlier eras, and I believe it is likely to become familiar again.

In summary, the United States has a fragmented political system in an external environment in which no single interest, threat, or value predominates. This is a recipe for pluralism with a vengeance, not for a grand strategy, however intelligent it may look on paper. The United States will "muddle through," to use Lindblom's term, rather than follow a coherent plan.[29]

Military Planning in an Uncertain World

None of this means that American foreign policy will be entirely without patterns. I doubt that we will undertake serious economic sanctions to improve the human rights in a major trading partner like China. Nor are we likely to deploy massive force for humanitarian goals, to secure secondary economic interests, or to uphold abstract principles of world order. At the other end of the continuum, inertia if not enlightened self-interest will maintain security commitments to allies in the Organization for Economic Cooperation and Development, and we are unlikely to permit the military conquest of Taiwan. Furthermore, diplomatic instruments, backed by demonstrations of force, will be important in areas of the world, such as East Asia and Eastern and Central Europe, where American interests are important but not compelling. Support for democracies, for countries with ethnic groups in the United States, and for humanitarian values is likely also to be provided when the cost is predicted to be low. But these boundaries leave a great deal in between. Whether the United States intervenes in cases like Somalia and Bosnia, how it will act if China puts military pressure on its neighbors, whether it would threaten to use force in a conflict between South American countries, whether it would provide guarantees or use force to inhibit proliferation, will be determined less by any grand strategy than by the balance of domestic interests and the play of domestic politics.

It has often been said that the current American enemy is uncertainty and instability. Whether or not this is true for the country at large, it is true for the American military. The domestic environment that will determine the missions it is directed to carry out is an uncertain and unstable one. Security policies will differ from one issue area to another and from one period of time to another,

as circumstances and domestic opinion vary. As I indicated in the epigraph, leaders of military organizations often ask their political superiors for general foreign policy guidelines so that they can develop an efficient force. In a well-ordered polity, such a request is not only reasonable but mandatory. As Bernard Brodie constantly stressed, we must not lose sight of Clausewitz's wisdom that politics must guide military policy.[30] But the politics that is going to guide American foreign and security policy is going to be pluralism, and its results cannot be codified ahead of time.

Unless and until the United States faces a major and pressing threat, foreign policy will begin at home. No American policy can be sustained without adequate domestic support. One might think that this could be arranged with adequate public education: if the experts develop any sort of consensus about at least the outlines of a necessary grand strategy, the public can be brought around to support it. Indeed, for all the current partisan sniping, the two political parties are not deeply divided on basic issues of foreign and security policy. But despite the best efforts of Madeleine Albright, even a secretary of state who places a priority on building domestic support faces severe constraints on the ability to do so.[31] In the late 1940s, when the partisan divisions were greater, those who favored the containment policy were able to work with opinion leaders throughout the society to develop strong foundations for the policy. I do not think this is possible now: not only is trust in government and many other organizations very low, but we lack the sort of civic leaders who were powerful in those days. Only the most extreme conspiracy theorists see the Council on Foreign Relations as anything but a social and status group. "Captains of industry" are absent, with the possible exception of a handful of leaders in the communications and information sectors, who lack the breadth of experience that earlier elites had. Union leaders have disappeared even faster than unions. University presidents, who once were national figures, now are itinerant money raisers. Those newspapers that have survived are much less relied upon than was true earlier, and television anchors lack the expertise and reputation that would allow them to be influential, even if professional ethics and the large corporations that own the networks permitted them to try. Known to the public now are "celebrities," largely from sports and the entertainment industry. I would not expect them to undertake the public educational campaigns we saw in the past.

What we are likely to see is that different groups, interests, and values will predominate in different areas and at different times. To take an extreme case, American policy toward Cuba has been "captured" by the emigrés in Florida in a way that is very familiar to students of American regulatory policy. When such a feat is impossible, we will see other patterns familiar in domestic policy making: shifting coalitions and logrolling. One group will agree to support

another's foreign policy in an area of great concern to the other (but not to itself) in return for reciprocation. A July 1997 newspaper carried a plea by the "Coalition for International Justice" that the United States arrest war criminals in the former Yugoslavia. From one perspective, it is heartening to see a coalition of such diverse organizations as the Muslim Public Affairs Council, the YWCA, B'nai B'rith, the Arab American Institute, the Anti-Defamation League, the Maryknoll Fathers and Brothers, and several labor unions, as well as individuals as different from each other as Patricia Derian (Assistant Secretary of State for Human Rights under President Jimmy Carter), Bianca Jagger, and former "hard liners" such as Max Kampelman, Paul Nitze, and Robert Dole.[32] But this is not the sort of coalition that can support a general foreign policy; it would not be activated by other issues. Although it would be an exaggeration to say that every new issue will produce a different alignment, there is little reason to expect the coalitions that form on questions like the policy toward the Congo, maintaining most-favored-nation status with China, expanding Nato, or expanding the North American Free Trade Association to bear much resemblance to each other.

Not only change but instability over time is likely, as the perceived effect of each policy influences later beliefs and preferences. Of course this phenomenon was not absent in the past: the American experience in Vietnam shaped policy for the succeeding decade. But with less to anchor American policy, smaller events will exert greater influence. Thus I suspect that how the Bosnian intervention ends will significantly influence the likelihood that the United States will undertake further missions of this kind, just as the deaths of a handful of soldiers in Somalia not only forced the United States to withdraw but reduced the American appetite for similar tasks.

Military planning, let alone rational procurement, will be very difficult in such a world. It is easy for a civilian theorist to say that the military should simply plan on being flexible and must prepare to deal with the unknown. But any military officer knows that there are severe limits on the extent to which this is possible. Indeed, in reaction to such instruction an obvious military strategy is to develop a force that can only be used in certain kinds of circumstances or in certain ways, in order to rule out at least the wilder possible political vagaries. Indeed, I admit to favoring a force structure that would make it impossible for the United States to engage in large interventions without extensive allied involvement; I think that others should carry more of the security burden, do not believe that there are threats to American vital interests that would leave those of our allies unscathed, and doubt that the United States has a monopoly of foreign policy wisdom, and so I would not mind giving allies a de facto veto over policy. But even with some degree of self-protection, the

military is likely to be called upon in unpredictable ways and places. The lack of major threats to vital American interests is an incredible boon to America and its allies, but it places unusual burdens on its military.

This environment will also be a difficult one for civil-military relations already under significant strain.[33] To employ military instruments for national goals that are secondary at best brings up a whole host of difficulties for the armed services, especially because many of the missions require frequent overseas deployments and retraining. Our military cannot be an over-armed police force that specializes in assisting local "civic action" programs, let alone ambitious nation-building. Yet these are almost certain to be prominent among the missions assigned to it. In this difficult and turbulent atmosphere, the closest working relations among civil and military officials at all levels is greatly to be desired. But it is extremely unlikely, as the two cultures have grown further apart over the past decade. Only a decreasing number of civilians have served in the military or have extensive experience in military affairs; fewer military leaders seem to have a deep understanding of proper civil-military relations. The result is not so much that one group or the other has grown excessively strong, but that both have mishandled their responsibilities and relations vis-à-vis the other. Civilians seem to have great difficulty in understanding why many activities will pose serious problems for the military and fail to consult adequately on issues with a strong military component, such as the proposed expansion of Nato. Military officials too often use their expertise to influence political decisions inappropriately, if not to actually make them, as the American military commander in Bosnia apparently did when he made clear that Nato troops would not arrest indicted war criminals. Uncertainty about American grand strategy will only exacerbate these problems. Dealing with them calls for excellent working relations and understanding on both sides of the civilian-military divide, but this divide has become deeper, and few seem to be willing or able to begin the efforts necessary to bridge it.

Notes

1. Roosevelt to Secretary of State, Washington, D.C., 1 May 1919, National Archives, State Dept., 110.7/56.

2. Quoted in Robert Butow, *Tojo and the Coming of the War* (Princeton, N.J.: Princeton Univ. Press, 1961), p. 190.

3. For the purposes of this paper, I will not distinguish between "classical" Realism (e.g.,Thucydides, E. H. Carr, Hans Morgenthau) and Neorealism (Kenneth Waltz).

4. Arnold Wolfers, *Discord and Collaboration* (Baltimore: Johns Hopkins Univ. Press, 1962), pp. 12–7.

5. The influence of nuclear weapons on world politics has been hotly debated; my own views can be found in *The Meaning of the Nuclear Revolution* (Ithaca, N.Y.: Cornell Univ. Press, 1989).

6. Karl Deutsch et al., *Political Community and the North Atlantic Area* (Princeton, N.J.: Princeton Univ. Press, 1957), chap. 2.

7. I have discussed the causes and implications of this in "The Future of World Politics: Will It Resemble the Past?" *International Security*, Winter 1991–92, pp. 39–73, and "International Primacy: Is the Game Worth

the Candle?" ibid., Spring 1993, pp. 52–67. Also see John Mueller, *Retreat from Doomsday: The Obsolescence of Major War* (New York: Basic Books, 1989); Max Singer and Aaron Wildavsky, *The Real World Order* (Chatham, N.J.: Chatham House, 1993); and Samuel Huntington, *The Clash of Civilizations and the Remaking of World Order* (New York: Simon and Schuster, 1996).

8. Frederick Hartmann, *The Conservation of Enemies* (Westport, Conn.: Greenwood, 1982); John Mueller, "The Catastrophe Quota: Trouble after the Cold War," *Journal of Conflict Resolution*, September 1994, pp. 355–75.

9. For an excellent discussion, see Eric Nordlinger, *Isolationism Reconfigured* (Princeton, N.J.: Princeton Univ. Press, 1995).

10. The literature on alternative grand strategies is voluminous; an excellent comprehensive survey is Barry Posen and Andrew Ross, "Competing Visions for U.S. Grand Strategy," *International Security*, Winter 1996–97, pp. 5–53.

11. The Commission on America's National Interests, *America's National Interests* (Cambridge, Mass.: Center for Science and International Affairs, Kennedy School of Government, Harvard Univ., July 1966), p. 5.

12. Bernard Brodie, "The Development of Nuclear Strategy," *International Security*, Spring 1978, p. 83.

13. Quoted in Martin Gilbert, *The Prophet of Truth, 1922–1939*, vol. 5 of *Winston S. Churchill* (London: Heinemann, 1978), p. 76.

14. For normative criticism, see Theodore Lowi, *The End of Liberalism*, 2d ed. (New York: Norton, 1979; 1st ed. 1969); for descriptive criticism see, for example, C. Wright Mills, *The Power Elite* (New York: Oxford Univ. Press, 1956), and Grant McConnell, *The Decline of Agrarian Democracy* (Berkeley, Calif.: Univ. of California Press, 1953). On pluralism in general see Andrew McFarland, *Power and Leadership in Pluralist Systems* (Stanford, Calif.: Stanford Univ. Press, 1969).

15. The classic statement is Charles Edward Lindblom, *The Intelligence of Democracy* (New York: Free Press, 1965).

16. This claim was most commonly made by students of security but was affirmed by some of those analyzing foreign economic policy as well: see Stephen Krasner, *Defending the National Interest* (Princeton, N.J.: Princeton Univ. Press, 1978) and Robert Gilpin, "No One Loves a Political Realist," *Security Studies*, Spring 1996, pp. 3–26.

17. Henry Kissinger, *White House Years* (Boston: Little, Brown, 1979), p. 130.

18. This need is neglected in most scholarly analyses; even the brief mention of domestic support in Posen's and Ross's canvass of candidate grand strategies is more than most treatments offer (Posen and Ross, pp. 16, 22, 31). It is usually assumed that the intellectual job of determining the best policy is the hardest part of the task, if not the only part.

19. My sense is that in addition to finding pluralism a menace to the country, Realists are deeply offended by the notion that something so important—indeed noble—as the country's stance in world politics should be determined by grubby domestic politics. Foreign policy would then be "a tale told by an idiot, full of sound and fury, signifying nothing"—which would not only rule out the possibility of developing coherent policy and explanations for policy but also call into question the importance and meaning of the analyst's calling.

20. Jerry Gray, "Senate, in a Rebuff to Clinton, Votes to Delay Base Closings," *New York Times*, 10 July 1997, p. A1.

21. *New York Times*, 10 April 1997, p. A26.

22. For the effect of domestic politics on procurement see, for example, James Kurth, "Why We Buy the Weapons We Do," *Foreign Policy*, Summer 1973, pp. 33–56; and Nick Kotz, *Wild Blue Yonder: Money, Politics, and the B-1 Bomber* (New York: Pantheon, 1988).

23. In what other country could a trade crisis be sparked by the actions of an obscure federal agency (the Federal Maritime Commission), which took everyone else in the executive branch by surprise? The story can be found in the *New York Times*, 17–8 October 1997.

24. Peter Katzenstein, *Small States in World Markets* (Ithaca, N.Y.: Cornell Univ. Press, 1985); Ronald Rogowski, "Trade and the Variety of Democratic Institutions," *International Organization*, Spring 1987, pp. 203–24.

25. For strategic trade theory see, for example, Paul Krugman, ed., *Strategic Trade Policy and the New International Economics* (Cambridge, Mass.: MIT Press, 1986), *Rethinking International Trade* (Cambridge, Mass.: MIT Press, 1991), and *Peddling Prosperity: Economic Sense and Nonsense in the Age of Diminished Expectations* (New York: Norton, 1994); Klaus Stegemann, "Policy Rivalry among Industrial States: What Can We Learn from Models of Strategic Trade Policy?" *International Organization*, Winter 1989, pp. 73–100; Helen Milner and David Yoffie, "Between Free Trade and Protectionism: Strategic Trade Policy and the Theory of Corporate Trade Demand," *International Organization*, Spring 1989, pp. 239–72; J. David Richardson, "'New' Trade

Theory and Policy a Decade Old: Assessment in a Pacific Context," in Richard Higgott, Richard Leaver, and John Ravenhill, eds., *Pacific Economic Relations in the 1990s* (Boston: Allen & Unwin, 1993), pp. 83–105; and Marc Busch, "The Strategic Trade Calculus of States: Cooperation and Conflict in Emerging Industries," unpublished dissertation,, Department of Political Science, Columbia Univ., 1994.

26. For the "clash of civilizations," Huntington, pp. 304–8.

27. Yossi Shain, "Ethnic Diasporas and U.S. Foreign Policy," *Political Science Quarterly*, Winter 1994–95, pp. 811–41.

28. See, for example, James Fearon, "Domestic Political Audience and the Escalation of International Disputes," *American Political Science Review*, September 1994, pp. 577–92. The discrepancy between current and past beliefs is commented on by Kurt Gaubatz, "Democratic States and Commitment in International Relations," *International Organization*, Winter 1996, pp.

29. Charles Edward Lindblom, "The Science of Muddling Through," *Public Administration Review*, Spring 1959, pp. 74–88. A sidelight is that if this analysis is correct, decisions will be hard to explain after the fact, because so many relatively small factors either influenced them, or could have. We are accustomed to trying to explain big and important cases, in which we believe that with so much at stake only major forces and considerations could have been responsible. But when we look at cases like the American intervention in Somalia or even the intervention in Bosnia, this assumption does not hold, because the costs and risks were low. For future decisions as well, many values and considerations could be at work, because even relatively small perceived gains will be sufficient to set policies in motion.

30. See especially his *War and Politics* (New York: Macmillan, 1973), chap. 2.

31. Steven Lee Myers, "Secretary of State Sells Foreign Policy at Home," *New York Times*, 8 February 1997, p. A6. For a discussion of decision makers' attitudes as to whether public support is desirable or necessary for an effective foreign policy, see Douglas Foyle, "Public Opinion and Foreign Policy: Elite Beliefs as a Mediating Variable," *International Studies Quarterly*, March 1997, pp. 141–70.

32. "Mr. President: Order the Arrest of War Criminals in Bosnia Now!" *New York Times*, 15 July 1997, p. A8.

33. See, for example, Richard Kohn, "Out of Control: The Crisis in Civil-Military Relations," *National Interest*, Spring 1995, pp. 3–17, the symposium in the following issue, and A. J. Bacevich, "Tradition Abandoned: America's Military in a New Era," ibid., Summer 1997, pp. 16–25. The difficulties are exacerbated but not caused by Clinton's unique characteristics.

Ψ

Our Electronic Addresses Will Be Changing!

Some time between 1 August and 30 September 1998, the Naval War College will shift to its own World Wide Web server and to a new Web "domain." When it does, all of its electronic addresses (including those of the Press) will change.

For the first year thereafter, visitors to our online service (on the College's Website) will automatically be forwarded to our new URL (which is not yet finalized but will be announced in our Autumn 1998 issue).

E-mail, however, will be forwarded only through 30 September 1998. After that date, or if e-mail to one of our current addresses is returned as undeliverable, contact us at ***<press@nwc.navy.mil>*** *or at the telephone or fax numbers given on page 164 of this issue. New individual addresses will appear in our Autumn issue.*

Redefining U.S. Hemispheric Interests

A Bold Naval Agenda for the Twenty-First Century

Commander Edmundo González, Chilean Navy

THIS PAPER MAKES THE FOLLOWING ARGUMENTS. First, the end of the Cold War coincided with an explosive growth in U.S.–Latin American trade, making it imperative for the United States to pay much greater attention to Latin America and its economic and political problems. Second, the best way to address some of those problems is to create a hemisphere-wide "Free Trade Area of the Americas." Third, as part of the process of enhancing hemispheric security and promoting stability, the United States should support the further development of Latin American naval capabilities, so that they can carry out some of the hemispheric security functions performed today by the U.S. Navy, thus freeing the latter to use its stretched resources in other parts of the world.

Through a geopolitical overview of the area and an analysis of the political, economic, and hemispheric security interests of the United States in this region, we will assess the suitability of the United States supporting the development of Latin American naval powers in order to protect and enhance common goals and interests. Due to the extensive scope of the topic, we will center the discussion on the major Latin American countries, suggesting which countries or areas require blue-water, green-water, or brown-water navies, and which

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countries are the most promising candidates for U.S. support in enhancing their naval capabilities.

We will take the unusual approach of looking at U.S. regional interests through Latin American eyes; that is, the author will try to position himself as a U.S. citizen, but one having personal experience of the Southern Hemisphere. Finally, we will demonstrate that each Latin American country faces a different set of circumstances, in an attempt to change the American perception that the region south of the Rio Grande can be analyzed as a single package.[1]

Geopolitical Vision

After the Second World War, and with the decline of the old colonial empires, the United States assumed undisputed leadership of the West. Its main postwar threats came from the Soviet Union and the People's Republic of China (PRC); therefore, the main efforts of the United States were centered in Eurasia. Consequently, as noted by a Chilean expert, "it was necessary for the United States to design a strategy that established a wall around those two hostile powers. That strategy, which was based on the Geopolitics School, founded by the American geopolitician Nicholas Spykman (1893–1944), constituted the basis of U.S. foreign policy for over five decades."[2] The strategy adopted by the United States during the Cold War also rested upon a liberal-democratic political system, a free market economy, and military alliances with key regional powers.

Spykman's ideas still remain an important element in the design and structure of U.S. national security strategy toward Eurasia. Spykman, contesting the Eurasian heartland theory of Halford Mackinder, asserted, "Who controls the Rimland controls Eurasia; who controls Eurasia will control the world destiny."[3] In his vision, "the Rimland consisted of Western Europe, the Middle East, the Arabian Peninsula, Iran, Turkey, Pakistan, India, Southeast Asia, China, Korea, Japan, and the Pacific coast of Russia. This list makes evident the relationship between geopolitical theory and the agreements and defense compromises assumed by successive U.S. administrations during the Cold War."[4]

Therefore, it can be no surprise that Latin America today is not a high priority in U.S. interests. The region is far away from, and not central to, the "Rimland," even though Latin America is in close geographic proximity to the United States. However, the underlying conditions are now quite different from what they were in the Cold War. The Institute for National Strategic Studies of the U.S. National Defense University has concluded that "given the expansion and consolidation of the European Community and the growing global reach of East Asian economies [i.e., the Rimland of Eurasia], the US is impelled to broaden the geopolitical and economic base from which it will operate in the

twenty-first century. The societies of the Western Hemisphere are the best and most obvious candidates with which to form any such condominium."[5]

In geopolitical terms, we can define Latin America as a huge mass of land (South America) connected to the United States by a gateway (Mexico) at one end of a bridge (Central America) that divides the two majors waters of the world, with a sprinkling of islands (the Caribbean states). We can place the center of political and economic importance of the region in South America, as we will demonstrate. South America is a "geopolitical triangle," with the smallest side represented by Argentina (1,620 nautical miles of coastline in the Atlantic), a second side by Chile (2,610 nautical miles of coast in the Pacific), and the longest by Brazil (4,000 nautical miles of coast in the Atlantic). Brazil, the region's geographic heart, connects almost the entire area with its complex network of rivers.

Mexico, adjacent to the United States and traditionally dependent on it for national security, has not been motivated to develop its armed forces. Because of the 1994 economic and political accommodation (the North American Free Trade Agreement) reached with Canada and the United States, plus its own severe financial constraints, Mexico is even less likely today to try ro develop a national military capability. Only drug trafficking and domestic unrest—both internal policing problems—impel Mexico toward significant investments in its armed forces.

South America is a different matter. Geography (most South American countries face open seas) and geopolitics (national rivalries) have traditionally promoted fairly strong military forces, especially naval ones. In general terms, blue-water naval capabilities for defense of large offshore areas, mainly by Argentina, Brazil, Chile, Colombia, Perú, and Venezuela, date to the last century. As one expert has noted:

> The post–Cold War setting has by no means altered the perceived South American need to have big navies, a view shared by nationalists as well as naval officers and others. A number of South American states, after all, have sizable, valuable offshore areas to protect, and big navies continue to be regarded as a natural feature of big states. Nonetheless, there are now significant disincentives to undertake naval expansion because of changes in the diplomatic, economic and political settings. The challenge for the larger Latin American navies therefore has become one of sustaining rather than enhancing naval status.[6]

This statement reflects the current situation in the region, although to complete the general perspective and make it accurate and coherent we need of course to add the U.S. interest into the picture.

If we consider South America as a whole, the area has three main maritime gateways. The first is the port complex on the Atlantic (Brazil), comprising Rio

de Janeiro, São Paulo, and Porto Alegre. The second gateway is in the Pacific (Chile), composed of Valparaiso, San Antonio, and San Vicente. The third, also in the Atlantic, in the delta of the Río de la Plata (Argentina, Paraguay, and Uruguay), includes the harbors of Buenos Aires and Montevideo plus the entrance to the Paraguayan river network. Consequently, Brazil, Chile, and Argentina (the so-called "ABC Pact") share unique geopolitical importance in South America, in addition to their value as the strongest economies of Latin America and as pillars of regional stability. These three countries also share other factors, such as having most of their populations and their most important economic centers on the coast. The coastline of their economic alliance, MERCOSUR (the Mercado Común del Sur, including Argentina, Bolivia, Brazil, Chile, Paraguay, and Uruguay) would be attractive to external aggressors. Also, Brazil and Chile rely on strategic offshore positions, such as Fernando de Moronha, Trinidade, and Martin Vaz islands (for Brazil) and Easter Island, Sala y Gómez, Robinson Crusoe, San Félix, and San Ambrosio islands (for Chile). It was the absence of such maritime positions that pushed Argentina into its 1983 conflict with the United Kingdom.

Brazil as the biggest side, and the heart, of the South American geopolitical triangle, deserves special comment. One Brazilian has written:

> Brazil occupies a privileged geographical position in the South Atlantic. Its northern coast opens out in the direction of the North Atlantic and the Caribbean Sea. The delta of the Amazon River allows the projection of maritime influence way upriver into the interior, reaching out to Brazil's western borders with its South American neighbors (except with Chile) which face the Pacific. The northeast coast unfolds in the direction of Africa, narrowing the distance between the two continents to 1,500 nautical miles. The southern and eastern coasts favor the construction of ports and terminals, and, inasmuch as they encompass the most productive areas of the country, most shipping is concentrated off those shores. Following this, it is not surprising that the South Atlantic Ocean stands out as vital to the country, and that there are considerable national interests depending on the sea, particularly those of a political and economical nature.[7]

South America faces two main geographical obstacles to infrastructural development: the Amazon forest and the huge Andes mountains. The difficulties of land-based communications between the Atlantic and Pacific economic centers of the continent make it imperative to use the sea to enhance regional economic integration. The geographical situation of South America, far from the world's main markets and linked to the rest of the world only by air and sea, also emphasizes the vital importance of ocean trade. Incoming and outgoing shiploads within MERCOSUR constitute an average of 95 percent of the tonnage of the total yearly cargo in foreign trade of that economic bloc.

A final geopolitical point is the role that Chile plays in the maritime control of the southern sea lines between the Pacific and Atlantic oceans, considering its sovereignty over the Strait of Magellan and Cape Horn (Drake Passage), and its naval bases and airfield on the Antarctic Peninsula. This region and its choke points may represent an important strategic zone during the next century, due to the fact that as of 1 January 2000 the Panama Canal will no longer be under U.S. control.

Political Interests

During the Cold War the United States aimed its political efforts toward the Rimland. Undoubtedly, the post–Cold War scenario brought changes, and four main U.S. political goals have emerged. The first priority of the United States is to control the political, economic, and military evolution of Russia and Eastern Europe; the second is to maintain economic and political predominance over the Rimland; the third is to spread democracy and the free market system; and the fourth priority is to maintain stability in marginal regions that could affect U.S. interests. Latin America is in this last priority.

For the United States to give Latin America a low priority in the global geopolitical context is an error. The United States has not been the only one guilty of such erroneous prioritization. During the Cold War, Latin America chose economic policies that were contrary to the free market model sponsored by the United States, and the majority of Latin American governments were not democratic. In spite of several attempts, such as the Inter-American Development Bank and the Alliance for Progress, no major efforts to foster democracy and free markets succeeded during that period. Guerrilla movements spread through Central and South America with political and military support from Cuba, the former Soviet Union, and China. Because of the particular characteristics of those movements, and in many cases due to the inaction of democratic governments, several Latin American militaries, sometimes with the support of the United States, played a dominant role in the politics and economics of their countries.

After the Cold War, however, President George Bush's administration proceeded with a Latin American program that focused on four priorities: debts, development, democracy, and drugs. This was the first serious attempt in several decades to improve relations between the United States and the rest of the hemisphere. Though the basic hierarchy of interests is unchanged, such programs as the Brady Plan (President Bush's 1990 initiative to establish a free trade area in the hemisphere) and the commitments of President William Clinton at the Miami summit in 1994 suggest that the political-economic development of

Latin America enjoys a somewhat higher priority in the eyes of the United States than was the case before the end of the Cold War.

One of the chief U.S. political interests in the region is to promote democracy. It is noteworthy that thirty-five Latin American countries (including all the Caribbean countries except Cuba) have today some form of a democratic representative government. There is a general consensus that democracy— despite its imperfections (there can be tyrannies of minorities in power), injustices (especially for poor people), and exploitation of the work of the masses (by short-sighted businesses)—is the only imaginable system of government that contemporary societies will tolerate. As one U.S. commentator has observed, "The chief US political interest in Latin America is stability. Washington's promotion of democracy in the region is not an end itself but, at least in part, a means toward promoting long-term stability and order."[8] Social unrest in the Western Hemisphere could have tremendous economic and security implications for the United States. "Because of Latin America's proximity to, and close economic ties with, the United States, any serious instabilities that might generate large waves of migrants, or affect US trade and investment adversely, have a direct impact upon US security."[9]

Economic Interests

To classify the Latin American countries economically, we can use the World Bank definition, which distinguishes three economic groups: low-income (per capita gross domestic products up to $670 in U.S. dollars), middle-income (GDPs from $670 to $7,510) and high-income ($7,510 or more). Almost all the Latin American countries fit into the middle-income group; the exceptions are such countries as Mexico, Argentina, Chile and Venezuela, which are in the lower section of the high-income level. Brazil is in the middle-income classification (with regard to per capita GDP), though it has the largest GDP in Latin America ($886 billion). Another economic peculiarity occurs with Chile, in that Chile has had the highest economic growth rate in the Western Hemisphere (an average of 7 percent annually) for the last decade. In general, the entire Latin American region is at present enjoying the success of free market economies and the benefits of improved general conditions.

The countries of Latin America, with Canada, form the largest market region with which the United States has a favorable balance of trade. As President Clinton has stated, "America's economy benefits enormously from the opportunity offered by the commitment of the 34 democratic nations of the Western Hemisphere to negotiate by 2005 a Free Trade Area of the Americas (FTAA). The Western Hemisphere is our largest export market, constituting over 35% of all U.S. sales abroad. The action plan will accelerate progress toward free,

integrated markets that will create new, high-wage jobs and sustain economic growth for America."[10]

The total GDP of Latin America is approximately two trillion dollars and is rising at an average rate of 3.5 percent per year. The region not only is a growing market, attractive to international investors, but also an important source of resources vital for the modern world, such as oil, copper, fish, grains, meat, wood, and fresh water. Equally significant, there is no reason to fear harsh economic competition upon the implementation of an FTAA. As noted by a perceptive student of the region, "This Hemisphere is largely complementary to the US in economic terms. Moreover, as a font of natural resources, as a market, as a locus of investment and as a platform for competitiveness-enhancing production partnership, Latin America will prove of greatly increased importance to our country in coming years and decades."[11]

The economic issue is extremely important for both the United States and Latin America. While the region could gain a large U.S. market with which to trade, through an FTAA the United States could augment the regional stability it desires, enhance its own prosperity, reduce drug traffic, control mass immigration, and deter future regional threats. The path to U.S. hemispheric leadership passes through the implementation of an FTAA; without it, the regional economic partners in such agreements as MERCOSUR, the Andean Pact (Bolivia, Colombia, Ecuador, Perú, and Venezuela), the Central American Common Market (or CACM, comprising Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua), and CARICOM (the Caribbean states) might search for new commercial partners, resulting in harm to the U.S. economy. The United States should take note of the red warning flag represented by Chile, which is already an active partner of APEC, the Asian Pacific Economic Cooperation.

The key point for the United States lies in its relationship with MERCOSUR. The shaping of an FTAA must start with this group, due to the economic strength of its main members (Argentina, Brazil, and Chile), their political stability, their favorable geopolitical circumstances, and their resources. Little by little, the rest of the Latin American countries could join this agreement, as their economies become more stable and they solve their security problems (the annual growth rate of each country could be a criterion for membership). The base of the FTAA must be the South American geopolitical triangle. As a group of American analysts has warned, "The South American Common Market, MERCOSUR, which is led by Brazil, and also includes Argentina, Paraguay and Uruguay [Chile became the fifth member in 1996 and Bolivia the sixth in 1997] is rapidly developing a free trade area in South America, while seeking closer relations with the European Union and several of the APEC countries, including Japan. If NAFTA is not expanded quickly to include Chile and subsequently Argentina, the US may be sidelined from South

American trade liberalization centered on MERCOSUR at the expense of American exports, jobs and US leadership in that region of the Americas."[12]

The implementation of an FTAA will be a long and painful process, but it must be done very soon. For Latin America the main problem is poverty. As noted by one writer, "In order to compensate for the high rates of population growth, Latin America economies will need to grow at an annual rate of 6% or more over the next decade in order to begin reducing the poverty levels. It is not clear whether such rates of growth will be possible."[13] At the moment, only Argentina and Chile have reached that goal, but an active FTAA could make it easier for the rest of MERCOSUR to achieve that growth rate. The most important point is that the region as a whole must achieve stability and not slip back into communism or other statist economic policies, which have proven in the past to be disastrous.

Hemispheric Security

The threats that could affect the whole hemisphere come from very different sources. Consequently, each needs its own, separate analysis. There are two main groups of threats: those that directly affect American society (such as terrorism, drug trafficking, environment degradation, illegal immigration, and refugee flows) and those that could affect Latin American trade (and therefore, ultimately, U.S. economic interests). The latter threat could materialize through conflicts among Latin American countries or through external aggression against the hemisphere.

Terrorism. Terrorism is a highly dangerous threat for the country where it originates and also for the United States. Unfortunately, certain residual aspects of the Cold War still affect countries of the region, in a form of ideological struggle. As long as Fidel Castro's regime continues in power, Cuban support of regional terrorist groups remains a reality; clear examples are the Marxist guerrillas in Guatemala, Nicaragua, El Salvador, and Colombia. In Colombia we find the worst case (the M-19 group and others), with a strong connection, known as "narcoterrorism," between these movements and the drug cartels. "The drug cartels often cooperate with some of Colombia's violent guerrilla groups in tactical operations that facilitate their illegal activities and further hamper the government's efforts at enforcing the law."[14]

Perú also has problems with this issue. The Sendero Luminoso and, recently, the Movimiento Revolucionario Tupac Amaru (MRTA) still create instability, preclude economic recovery, weaken fragile democratic institutions, and even worse, aggravate the drug trafficking problem, as in Colombia. Mexico, to a lesser degree, faces similar problems, in its district of Chiapas.

Drug Trafficking. This problem seriously affects American youth. The solution is not simple: it starts in American homes, with greater control over teenagers and more presence of both parents in the home. The final step of the solution

can be found in the incremental suppression of drug production in the countries of origin, and also of trafficking, across the whole chain of transportation and distribution (in which the sea is one of the preferred routes). But the real, permanent answer to this last part of the problem is to improve the economies of the producing and trafficking countries with an instrument like the FTAA. The problem needs multiple solutions, because it has many sources. The United States usually tries (incorrectly) to manage the problem by blaming only the drug-producing countries and those who are dealing in the drug traffic itself.

One option is to increase measures against the cartels, mainly at the production points in Perú and Bolivia, the processing sites in Colombia, and the transit routes through such countries as Mexico, Ecuador, and Venezuela—and also Central America and the Caribbean as a whole, since these regions produce and transport most of the drugs entering the U.S. market. The main problem with the cartels is that they have given rise to powerful criminal organizations that in some countries are far too powerful for the local police and judiciary to handle. As one observer puts it, "These mafias are attaining the ability to subvert and paralyze local institutions and foment a mosaic of violence incompatible with the refinements of democracy, or, indeed, the existence of any civilized government."[15] Let us, however, not lose sight of the fundamental truth about the real nature and dimension of this threat: "Although the United States represents only 5% of the world's population, its citizens consume over 50% of the total world supply of drugs."[16]

Illegal immigration and refugees. The twin threats of illegal immigration and refugees affect the United States in the same way, despite their legal distinction. This combined problem is similar to drug trafficking, in that it directly impacts the United States and has its origins in the several developing countries of the region that are relatively close to North America. Like drugs, its true solution can be found in improving the economies of the Latin American nations that produce the problem, because people who migrate are trying to find a better life and improved conditions. The main sources of illegal immigration and refugee flows are Guyana, Suriname, Central America, the Caribbean (mainly Cuba, the Dominican Republic, and Haiti), and Mexico. U.S. policy toward Mexico aims in the right direction, with the integration of Mexico into NAFTA; President Clinton's proposed FTAA could be the solution for the remaining areas.

Environmental degradation. Environmental degradation is a threat to all our economies and to the very existence of the human race. There are two main areas of concern in Latin America: fisheries and the rain forests. The depletion of the existing fishing stocks by overexploitation has been felt not only by the scientific community but also by the general population. It has changed eating and living habits throughout the hemisphere, due to the disappearance of many species. Latin American nations took note when in 1995 Canada and Spain had a serious

disagreement over the depletion of fishing stocks; they note also the continuing dispute between the United States and Canada over the exploitation of West Coast salmon stocks. To forestall such evils, Chile has passed a law regarding the concept of *Mar Presencial* (sea of presence), and Argentina is talking about the "Mile 201 Concept."[17] As a South African analyst has noted, "Overfishing . . . spread, in order, from the North Atlantic to the North Pacific in the 1950s, the Eastern Atlantic and the Eastern Pacific in the 1960s, to the Indian Ocean and the Antarctic in the 1970s, and to the South Pacific and Southwest Atlantic in the 1980s."[18]

The other threatened environmental regime, the tropical rain forests, are by far the richest habitats on earth. At least two-thirds of the world's plant species, including many exotic flowers and plants, thrive in the tropics and subtropics. Rain forests are also part of the global weather system: everyone on the planet is either directly or indirectly affected by them. Destroying them alters the hydrological cycle, causing drought, flooding, and soil erosion in areas where such events had been rare. Cutting these forests also changes the reflectivity of the earth's surface, which in turn alters wind and ocean current patterns, and rainfall distribution.

The use of the rain forest poses a problem to all the world and in particular to the Western Hemisphere; Brazil is endowed with a full third of the world's rain forests. There are those who hypothesize that war could result from the misuse of this vital resource, in view of the common attitude among governments in the region that this important land resource is an economic asset for the development of their countries. If the United States wants an integrated solution to the problem, there are two ways to reach one: direct U.S. economic support to countries dealing with the depletion that has already occurred, and the FTAA proposal.

Dispute and conflict resolution. From the U.S. perspective, the main goal in Latin America is to preserve the stability necessary for commerce. As Alberto Coll of the U.S. Naval War College has observed, "Militarily, the chief U.S. interests are: (1) to check the rise of any military threats to U.S. territory that might arise from Latin

Group A	vs.	Group B
Brazil	vs.	Argentina
Chile	vs.	Argentina
Chile	vs.	Perú
Ecuador	vs.	Perú
Colombia	vs.	Venezula

America, and (2) to prevent hostile powers from gaining influence in the region and enhancing their capability to damage U.S. political and economic interest."[19]

To understand clearly the overall problem, we must analyze the alliances and antagonisms that have existed between various Latin American countries in this century. Doing so, we find a pattern: in the many bilateral and multilateral disputes that have occurred, the nations informally have sorted themselves into two groups. We arbitrarily designate them A and B (as shown in the table).

Today the situation is rather different, and the prospects for inter–Latin American conflict are probably at a historical low. However, Latin America still needs an effective mechanism for the resolution of disputes and possible conflict, taking into account that Group A and Group B still underlie the regional balance of power. An example of success is the 1984 peace treaty (Tratado de Paz y Amistad) between Argentina and Chile; instances of failure are the two conflicts between Ecuador and Perú in Cordillera del Condor and the Falkland/Malvinas war between Argentina and the United Kingdom, all of which took place in the last decades. These conflicts, however, constitute exceptions to the overall pattern of stability and growing cooperation between democratic states in the region; they have been the only wars in South America during this century. A general balance of power is one of the key requirements to ensure such stability. As one expert has observed, "Economic and political constraints make it difficult for either side to act unilaterally. As integration and interdependence proceed apace, the benefits of cooperation become clearer."[20] Thus, the other key requirement for stability will be economic integration.

Protection of commerce. The defense of commerce is the center of gravity of hemispheric security issues, especially in an FTAA scenario. Commerce will give political and military stability, resolving the majority of the security problems in the region. As was argued long ago by Julian Corbett, "It is commerce and finance which now more than ever control or check the foreign policy of nations. If commerce and finance stand to lose by war, their influence for a peaceful solution will be great; and so long as the right of private capture at sea exists, they stand to lose in every maritime war immediately and inevitably whatever the ultimate result may be."[21]

Commerce protection offers special value in terms of the maritime characteristics of this hemisphere. South America, in essence a continental island, has three main maritime accesses for trade to the harbor complexes of the "geopolitical triangle." Ninety-five percent of the region's seaborne commerce flows through these vital choke points, and they need special protection during peace, crisis, or war against external or internal threats. As Admiral A. T. Mahan pointed out, "Trade is what makes countries rich; and the more one trades, the richer one becomes." Therefore, the protection of these three main South American sea routes is of the

utmost importance to all regional countries that aspire to membership in FTAA, and of course therefore to the United States as well.

This commerce protection must not be seen only as a task for crisis or war. In peacetime we find several threats against such commerce, the biggest danger being piracy. For example, during the 1980s "there were more than 1,000 reported acts of piracy against merchant vessels. These range from highly organized commando-style raids to the opportunistic plunderer. Equated with 'international terrorism at sea,' piracy, along with cargo fraud and the carrying of illegal cargoes of weapons and narcotics, is an increasing problem. New protective measures, a comprehensive intelligence and tracking facility, and improved enforcement through regional and international cooperation are all required to combat this trend. In 1993, it was estimated that robbery at sea cost the world's merchant ship owners US $300 million dollars annually."[22]

Hemispheric defense. U.S. security policy looks mainly to the Nato alliance for the protection of its interests in Eurasia in a "major regional contingency" (MRC). Though today U.S. military strengths may be able to cope with two simultaneous MRCs, budget constraints will force the United States to limit itself to only one, so as to develop and fund the "military after next." In this future scenario a regional force will be needed that can safeguard hemispheric security in a "lesser regional contingency" (LRC) while the U.S. Navy is busy elsewhere in an MRC. These LRCs could arise inside Latin America, or they could be caused by external threats affecting regional commerce or stability. To establish the necessary local forces, the United States should support "regional force projection navies," at least one in the Pacific and one in the Atlantic, each able to deploy a battle group built around a carrier operating vertical-and-short-takeoff-and-landing (VSTOL) fixed-wing aircraft and helicopters—that is, a CVHBG—and also an amphibious ready group with a marine brigade embarked. The proposed regional force could be efficient and effective, taking into account that:

- It would be less expensive for the United States to cooperate with a regional Latin American force than to deploy its own forces.
- The concept would make it possible for the United States to concentrate its main military efforts in other areas.
- The United States would be better able to implement its concept of the "military after next."
- The allied regional forces would be prepared for combat using U.S. Navy procedures, and they would know better than anybody else the realities of the Latin American area.

• It would allow collective security (to be applied against external threats) or cooperative security (against a rogue regional country).

We will now show that some countries in Latin America have considerable naval forces and that those countries can employ them on a continental scope, and even globally, in missions (such as peacekeeping operations) that extend beyond the present U.S. regional focus on counter-drug operations.

U.S. Interests and Latin American Navies

To start, we need some definitions. First, a "blue-water navy" is one "designed to operate in the oceans of the world as opposed to a ["brown-water"] navy designed to operate in coastal waters."[23] A "green-water" navy is a concept between blue-water and brown-water—closer to blue, but with the capability only to counter threats from its neighbors. Further, a blue-water navy must be capable of regional force projection, whereas a green-water fleet needs only to project force into adjacent areas. Brown-water fleets are sometimes characterized as forces for offshore or inshore territorial defense, or as "landlocked navies."

Latin American countries generally have a degree of naval power that matches their sovereign national interests. In several cases, it would be appropriate for the United States to support the development of naval capabilities that will support and complement U.S. interests (see table).

Mexico, the biggest Hispanic country in the world, is too close to the United States to be concerned about external military threats. However, the United States needs Mexico to control two important security issues. The first is the drug traffickers that use Mexico as a corridor; the second is illegal immigration, of which Mexico is the main source. In both cases U.S. interests are at stake and would be served by an offshore, brown-water Mexican navy that works actively against such problems.

Central America, the Caribbean states, Suriname, and Guyana have at the moment coast guards rather than navies. While their capabilities are not sufficient to confront external powers or even larger Latin American navies, they can aspire, with U.S. support, to useful functions in response to the variety of maritime security problems in their areas, such as counterdrug operations and controlling illegal immigration. Some of these coast guards could even band together in a regional force.

Colombia and Venezuela are two neighbors that traditionally have had territorial disputes and conflicts. Their crisis was reached in 1987, on maritime delimitation in the Venezuelan Gulf. Today there is still a degree of tension in

Proposed Latin American Navy Classification

	General Classification	South America	Central America & Caribbean
Regional Power Projection Navies	Blue-Water	Brazil Chile	
Adjacent Force Projection Navies	Green-Water	Argentina	
Offshore Territorial Defense Navies	Brown-Water	Colombia Ecuador Perú Uruguay Venezuela	Mexico
Inshore Territorial Defense Navies	Brown-Water	Guyana Suriname	Anguila Antigua & Barbuda Aruba Bahamas Barbados Belize Costa Rica Cuba Dominica Dominican Republic El Salvador Grenada Guatemala Haiti Honduras Jamaica Montserrat Nicaragua Panama St. Kitts & Nevis St. Lucia St. Vincent & the Grenadines Trinidad & Tobago
Landlocked Navies	Brown-Water	Bolivia Paraguay	
Total		12	24

their relations, but it seems that the situation will be defused by successive bilateral agreements and growing cooperation. The main issue here is drugs. Colombia is the focal area, since it is the processing point for the entire cocaine traffic. Venezuela, close to and connected with Colombia by jungles and rivers, serves as an ideal drug-traffic node. Although both countries aim to develop blue-water navies, U.S. interests would be best served by offshore brown-water forces, mainly to prevent seaborne drug trafficking. Blue-water naval capabilities for either country could disrupt the delicate balance in that area.

The situation between Ecuador and Perú is similar, but there are differences. Peru's history is the most warlike in Latin America; during the last century it was the aggressor in two wars against Chile and in this century was twice an aggressor against Ecuador. This is the main reason that Perú has always pursued a strong naval capability. Ecuador, on the other hand, has traditionally aimed at a defensive naval force. These two countries are also combatting the drug problem: Perú is the main producer of basic cocaine in the world, exporting this crop to Colombia for processing; Ecuador is an active corridor for trafficking. Therefore, the United States needs in this maritime area rigorous control of such trafficking, and the best way to achieve it is by means of brown-water navies. In addition, the development of offshore territorial defense navies would keep a balance between these two neighbors, which have not yet resolved their border dispute in Cordillera del Condor.

Uruguay is a special situation. A relatively small country, it is surrounded by the two largest South American nations, Argentina and Brazil. The probability of disputes and border conflicts with either neighbor is remote. Also, Uruguay does not have a major drug trafficking or illegal immigration problem. Therefore, from the U.S. perspective, Uruguay's major contribution to hemispheric security would be the local protection of maritime commerce through the choke point of the delta of the Río de la Plata, in conjunction with Argentina. To make such a contribution, it needs at least an offshore brown-water navy.

It is apparent from a map that landlocked Bolivia and Paraguay need not aspire to anything more than a modest capability. Their lakes and rivers require them to focus on counterdrug activity. However, Bolivia is the second-largest producer of cocaine in the world, and Paraguay contributes to the drug trafficking with its complex network of rivers, which act as bridges between the two oceans. Therefore, both nations need robust internal maritime security forces.

Brazil and Chile share several characteristics that should be considered in proportion to the countries' sizes. Neither Brazil nor Chile is greatly affected by hemispheric drug trafficking or illegal immigration to the United States. Brazil, however, faces the threat of environmental degradation, whose solution must involve the world community, especially the United States. Brazil's and

Chile's geopolitical locations within the region, plus their possession of strategic offshore positions, allow them to protect their maritime commerce by guarding the two main choke points or gateways to the continent, at different ends. Likewise, their traditionally strong navies operate in the largest oceans of the world and control several key natural maritime passages;[24] they merit the support of the United States in assuming the protection of continental commerce as part of a regional force.

Argentina could be, as none in the region doubt, in the same group with Brazil and Chile. Argentina, which has in the past been Brazil's and Chile's common traditional rival, is not so today, for the three countries have reached an economic accommodation through MERCOSUR.[25] Moreover, as noted, Argentina and Chile signed a peace treaty in 1984, showing the world an excellent example of the possibilities of international conflict resolution. Their national legislatures are searching today for a peaceful solution to the last remaining issue of border interpretation, under the spirit of the treaty. However, from the viewpoint of the United States there still exists a single problem: confidence. This confidence has nothing to do with hemispheric security issues, but with an old and loyal ally of the United States, the United Kingdom. Until the United Kingdom and Argentina amicably settle their conflicting claims over the Falkland, South Georgia, and South Sandwich islands, the United States will have difficulty fully supporting an Argentine blue-water navy. Nonetheless, it is an indubitable reality that Argentina is an active part of the South American geopolitical triangle. Taking all this into account, it would be in the U.S. interest to support an Argentine green-water navy capable of adjacent enforcement and protection, but not regional power projection. Such an arrangement would enhance maritime security in the area without also disrupting the balance of military power between Argentina's larger neighbors: Brazil and Chile. The recent U.S. designation of Argentina as a "major non-Nato ally" is a promising sign in this respect.[26]

* * *

Given actual post–Cold War conditions, the United States needs to pay more attention to the Western Hemisphere, taking into account the important and growing economic interests at stake and the hemispheric security issues common to both American continents.

The Free Trade Area of the Americas should become a reality soon, in order to facilitate solutions for many of the hemisphere's security and economic problems. The incorporation of new members ought to be gradual and selective, starting by integrating into NAFTA countries that have stable democratic governments and growing economies. This can be followed by the absorption

of MERCOSUR, the strongest economic bloc of South America; the desired stability of a regional free trade system will result.

To achieve a comprehensive hemispheric security environment, it will be necessary for the United States to promote an appropriate balance of military power between potential disputants. The United States also should continue to reduce its military presence in the Latin American region and transfer responsibilities to a reliable regional force. This will allow the United States to concentrate on other areas of the world, where there are no allied forces.

Taking into consideration the maritime dimensions of many of the economic and security issues at stake in this hemisphere, the United States should promote and support the development of different types of Latin American navies (as outlined above, in the table). The consequence of moving in the general direction suggested here would be greater prosperity and security for all of Latin America and also for the United States.

Notes

1. For the purposes of this article, "Latin American countries" refers to all the nations of the Caribbean, Central and South America, and Mexico, although not all have the same linguistic roots; "the region" and "regional" refer to Latin America, as defined; and "the Hemisphere" denotes the Western Hemisphere—North, Central, and South America plus the Caribbean states.

2. Fernando Thauby, "Politicas de EEUU hacia la Región, Lógica, Prioridades y Estabilidad," *Revista de Marina*, no. 836, p. 8.

3. See Nicholas John Spykman, *The Geography of Peace* (New York: Harcourt Brace, 1944). Spykman's best-known work was *America's Strategy in World Politics: The United States and the Balance of Power* (NewYork: Harcourt Brace, 1942). See also Sir Halford Mackinder, "The Round World and the Winning of the Peace," *Foreign Affairs*, July 1943.

4. Thauby, p. 8.

5. Stuart E. Johnson, *Redefining U.S. Interests in Latin America* (Washington, D.C.: Institute for National Strategic Studies, National Defense Univ., February 1992), p. 6.

6. Michael A. Morris, "Challenges for Latin America," in *Maritime Policy for Developing Navies*, ed. Greg Mills (Johannesburg: South African Institute of International Affairs, 1995), p. 171.

7. Joao Carlos da Silva, "Brazilian Naval Power," in Greg Mills, ed., pp. 242–3.

8. Alberto R. Coll, "United States Strategic Interests in Latin America: An Assessment," *Journal of Interamerican Studies and World Affairs*, 1996, p. 54.

9. Ibid., p. 46.

10. William J. Clinton, *A National Security Strategy of Engagement and Enlargement* (Washington, D.C.: The White House, February 1996), p. 29.

11. Johnson, pp. 12–3.

12. The Heritage Foundation, *Issues '96: The Candidate's Briefing Book* (Washington, D.C.)1996.

13. Coll, p. 53.

14. Ibid., p. 50.

15. Johnson, p. 36.

16. Coll, p. 51.

17. For *Mar Presencial*, see James L. Zackrison and James E. Meason, "Chile, *Mar Presencial*, and the Law of the Sea," *Naval War College Review*, Summer 1997, esp. pp. 70ff.; and Jorge Martínez Busch (Adm., Chilean Navy), *The Presencial Sea: The Facts: Challenges to Be Faced: The Future* (Valparaiso: 1994). "The 201 Concept" regards rights against overfishing in the high seas adjacent to a nation's exclusive economic zone.

18. Greg Mills, "Insecurity and the Developing World: The Maritime Dimension," in Mills, ed., pp. 25–6.

19. Coll, p. 45.

20. Morris, p. 182.

21. Julian S. Corbett, *Some Principles of Maritime Strategy* (London: Longmans, Green, 1911), pp. 95–6.

22. Mills, p. 24.

23. Lew Lind, *Sea Jargon: A Dictionary of the Unwritten Language of the Sea* (Cambridge, U.K.: Patrick Stephens, 1982), p. 40.

24. For Brazil, the passage between Natal and Freetown in Sierra Leone, narrowing the distance between South America and Africa to only 1,500 nautical miles; for Chile, the Strait of Magellan and the Drake Passage, the only natural communications between the two oceans.

25. For background on, and a proposal regarding, Argentine-Brazilian-Chilean relations, see Pedro L. de la Fuente (Cdr., Argentine Navy), "Confidence-Building Measures in the Southern Cone: A Model for Regional Stability," *Naval War College Review*, Winter 1997, pp. 36–65.

26. For Argentina's international security role, see Herbert C. Huser, "Democratic Argentina's Global Reach," in this issue.

Ψ

Democratic Argentina's "Global Reach"

The Argentine Military in Peacekeeping Operations

Herbert C. Huser

Buenos Aires, 10 March [1996] TELAM—Lieutenant General Martin Balsa, the Army chief of staff, has emphasized the high professional level shown by Argentine military officers who joined the peacekeeping forces. He favors an active and well-trained Army, instead of an empty and poorly trained Army.

Balza told Radio America: "We are peace professionals. Our mission is to prevent wars. We, therefore, must be prepared to deter."[1]

SEVEN YEARS EARLIER, SUCH SENTIMENTS by an Argentine Army chief of staff would have been unthinkable. Argentina, although returned to civilian rule, was still dealing with a civil-military crisis of the first order, and the recently passed Law of National Defense did not list international peacekeeping among the roles and missions of the Argentine military. When on 9 July 1989 President Raúl Alfonsín's administration ended (with his resignation five months before the end of his term) and President Carlos Menem's began, Argentina had only a few peace observers on United Nations "blue helmet" missions.[2]

On the fourth anniversary of Menem's presidency, however, there were 1,021 Argentine military personnel deployed in UN peacekeeping operations, some 90 percent of them in Croatia in the UN Protection Force. United Nations "blue helmets" worldwide then numbered 78,444, an all-time high, up from

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14,724 in mid-1989. The Argentine contribution would peak, at 1,471, eight months later.[3]

These statistics reflect a major change in the foreign policy priorities and alignments of Argentina and also in the nature and scope of the roles and missions of the Argentine armed forces, including—very prominently—its navy. Why has this change occurred? What does it signify for the future?

Evolution of Argentine Military Participation Abroad

For most of its 187-year history Argentina has had no military forces deployed outside its borders or territorial waters. The only exceptions have been the Wars of Independence (1816–1824), the War of the Triple Alliance (1865–1870), and arguably, the 1982 war in the South Atlantic (although most observers outside Latin America regarded the brief occupation of the Malvinas/Falklands as an Argentine invasion of British territory, the Argentines emphatically did not). Argentina remained neutral in both World War I and World War II, declaring war on the Axis in the latter mostly to become a charter member of the United Nations and so avoid losing prestige and voice in the postwar order.

Indeed, Argentina was a reluctant partner in most international security arrangements until quite recently. Immediately following World War II the Juan Perón administration sought to make Argentina a Western Hemispheric rival to Brazil and even the United States for influence in South America. As with most countries in the Southern Cone, Argentine military doctrine at that time adhered to a geopolitical view of the world. Following Perón's political demise in 1955, however, the armed forces—who would be either in government or only a step away for the next twenty-eight years—assumed a purely national focus. They saw their roles and missions both in terms of internal security (preventing infiltration of local groups by communist cadres to foment insurgencies—a mission that would culminate in the "dirty war" of 1976–1979) and of external security (seeking to secure Argentina's borders and territorial claims, including most of the South Atlantic islands and a slice of Antarctica).

Consequently, Argentina's international presence in multinational collective security organizations or peacekeeping operations was minimal. Nonetheless, in the late 1950s Argentina began making small contingents of Argentine military officers available for UN observer missions. These contingents remained very small; when Menem came into office there were only twenty-one people involved, seventeen of them in UN missions authorized only the year before.[4]

Menem's predecessor, Alfonsín, had been preoccupied with severe economic and civil-military problems and so had not sought to make Argentina an international player. To the extent his administration had had an international theme at all, it was to end Argentina's status as something of an international

pariah, a consequence of the junta governments of 1976–1982, the "dirty war," and the Malvinas/Falklands debacle. To that end he espoused solidarity with Third World countries and sought mediated settlements of remaining international disputes involving Argentina. Defense policy languished (not until four years into his administration was a National Defense Law enacted), and President Alfonsín's attention to the military was restricted to attempting to reform its institutions and seeking to resolve the serious malfeasance and human rights charges stemming from the "dirty war" and the war in the South Atlantic. Moreover, Alfonsín had to deal with three uprisings by disaffected elements of the military. His defense policies were domestic in nature, designed for the most part to dissuade the military from political involvement and to reduce the armed forces' capacity to influence the government. He had little interest in foreign matters, and none in military missions in external venues.

President Menem, however, approached the government's relationship with the military, and Argentina's international role, quite differently. Within three months Menem pardoned most of those in the military accused of human rights violations and crimes (by a year and a half later he had pardoned them all, the last ones being the most notorious and politically prominent). He pardoned as well those arrested and charged with sedition in the three uprisings during the Alfonsín administration, and also a significant number of former insurgents. He himself had to put down a fourth uprising, at the end of 1990, but by then he could count on the support of the Argentine military hierarchy in so doing.

Menem's foreign policy forsook the traditional Argentine benchmarks of nationalism, statism, and protectionism. He was, and remains today, highly internationalist in his policies, considering it in Argentina's interest to be on the "right side" of the United States and the United Nations in the rapidly evolving post–Cold War era. Having defused with pardons the human rights and uprisings issues, and having apparently prevented a resurgence of military involvement in domestic political affairs, he began to employ the armed forces of Argentina to further his foreign policy agenda.

Menem's first opportunity to involve Argentina's armed forces in UN peacekeeping and monitoring on a larger scale came in February 1990, when the UN Secretary-General sought out Argentina to provide fast patrol boats to support the United Nations Observer Mission in Central America (ONUCA). This would be the first use of member-country naval forces in this type of mission; Argentina deployed four Israeli-built *Dabur*-class craft. The ONUCA operation had three positive consequences for Menem and the Argentine Navy: it integrated Argentina more fully into the expanding UN role in resolving conflicts (and signaled support of the evolving "New World Order"); it supported peace operations in Central America, as a part of the "Contadora Support Group," through which Argentina had sought to resolve the conflicts

of the 1980s; and it improved training, readiness, and crew experience without incurring additional cost to Argentina, since the UN paid for the operation.[5]

But Argentina's real "New World Order" debut would come as a result of the Iraqi invasion of Kuwait, in the DESERT SHIELD/DESERT STORM operations, collectively known as the Persian Gulf War. Argentina sent a destroyer and a frigate (later relieved by a frigate and a support ship) and several air force cargo planes to support the United States–led blockade of Iraq, a part of DESERT SHIELD. These elements had a complement of six hundred officers, sailors, and airmen, the vast majority in the sea service. Argentina thus became part of a peace-enforcement operation sanctioned by the United Nations but executed by a multinational coalition force that would ultimately number in the hundreds of thousands. While somewhat controversial at home, especially in the Congress, the deployment was a clear commitment by the Menem administration to support international efforts more than rhetorically or in very small ways.[6] This action outside the hemisphere was unprecedented for Argentina. As the only Latin American country to commit forces in the Gulf war, Argentina stood out among Western Hemisphere nations.

As impressive as the Gulf war participation was, it did not in itself represent a sustained commitment on the part of Argentina to United Nation peacekeeping operations. Within a year, however, a new and major UN peacekeeping force sent to former Yugoslav republics would elicit further Argentine participation in such operations. Moreover, this new commitment would be fulfilled not by the wide-ranging, internationally oriented Navy but by the traditionally parochial Army.

On 15 February 1992, President Menem announced a major Argentine ground contribution to the United Nations peacekeeping operation being mounted for deployment principally to Bosnia-Herzegovina and Croatia. Menem stated that Argentina would provide one of the twelve infantry battalions of the formation thereafter known as UNPROFOR (the United Nations Protection Force). The Argentine unit would consist of 850–900 personnel and be capable of operating independently. It would be stationed in Western Slavonia, in the northwest part of Croatia, rotating most of its personnel every six months. And it was expected to be in place and performing its mission by April!

The Argentine Army had no experience in the deployment of major combat units overseas. The Malvinas movement ten years before had not been considered a foreign deployment, and in any event it provided few if any lessons useful for this UN mission. No existing unit was close to being prepared, since formations of this size (regiments, in the Argentine infantry nomenclature) were geographically based and consisted of relatively small professional cadres and

large complements of conscripts; even those personnel were in short supply and not suitably trained for "blue helmet" units.

Moreover, the UN had specified that all members of units provided for its missions were to be volunteers and possess language skills, particularly English. Within days of Menem's announcement the search was begun for suitable volunteer officers and noncommissioned officers (NCOs). In the event, there were two or three times as many applicants as positions for the first 865-man unit. The perquisites for soldiers serving in this unit were considerable—especially pay, several times the normal level in the severely budget-constrained military. Initial preparation of the personnel was done at the corps level; the unit was then formed up at Campo de Mayo, a huge army installation outside Buenos Aires.

By May 1992 the Batallón Ejército Argentino (or BEA—the Argentine Army Battalion) was fully deployed in Western Slavonia, Croatia. There were also Argentine personnel in UNPROFOR staff and liaison positions, as many as seventy-two, over and above the nominal 865 in the BEA. These personnel—excluding perhaps a handful in command and staff positions—were rotated every six months until June 1995, when as a result of events on the ground and incipient changes in the status of UNPROFOR the Argentine contingent began to redeploy gradually back to Argentina. By the end of 1995, the BEA had stood down.

Coinciding with the BEA deployment, in April 1993 Menem appointed as his minister of defense Oscar Camilión, a highly respected and experienced diplomat. Camilión would bring his considerable skills to bear on the use of the military in diplomacy, starting with a second major deployment of the Argentine armed forces in support of UN peacekeeping. This time the setting was Cyprus, to which Camilión had been the UN envoy immediately prior to his appointment as minister of defense.

The Cyprus contingent, part of a UN mission set up in 1964, would consist of both army and marine corps elements, and even a small number of air force helicopter pilots. With an initial strength of 375, the contingent would stabilize at about 390, where it remains at this writing. On 17 February 1997 it was announced that Brigadier General Evergisto de Vergara, Argentine Army, would be the new commander of the UN peace force on Cyprus (thereby having under his authority, among others, British troops). He is the first Argentine military officer to have an entire UN "blue helmet" mission force under his command.[7]

The Argentine armed forces have undertaken three other significant troop commitments. In early 1995 Argentina provided a contingent of about 115 (of which about a hundred were civilian police) to the UN mission in Haiti until October of that year, when it was phased out. Also in early 1995, fifty-seven

Argentine military engineers went to Kuwait; an element of nearly that size is maintained there today. In addition, although the BEA and UNPROFOR have gone, the Argentine Army contributed a seventy-three-man reconnaissance unit, plus civilian police and several staff officers, to UNTAES, the UN temporary administrative mission in Eastern Slavonia, until that mission ended in August 1997. Argentina also provides civilian police personnel to the IPTF (International Police Task Force) in Bosnia-Herzegovina.

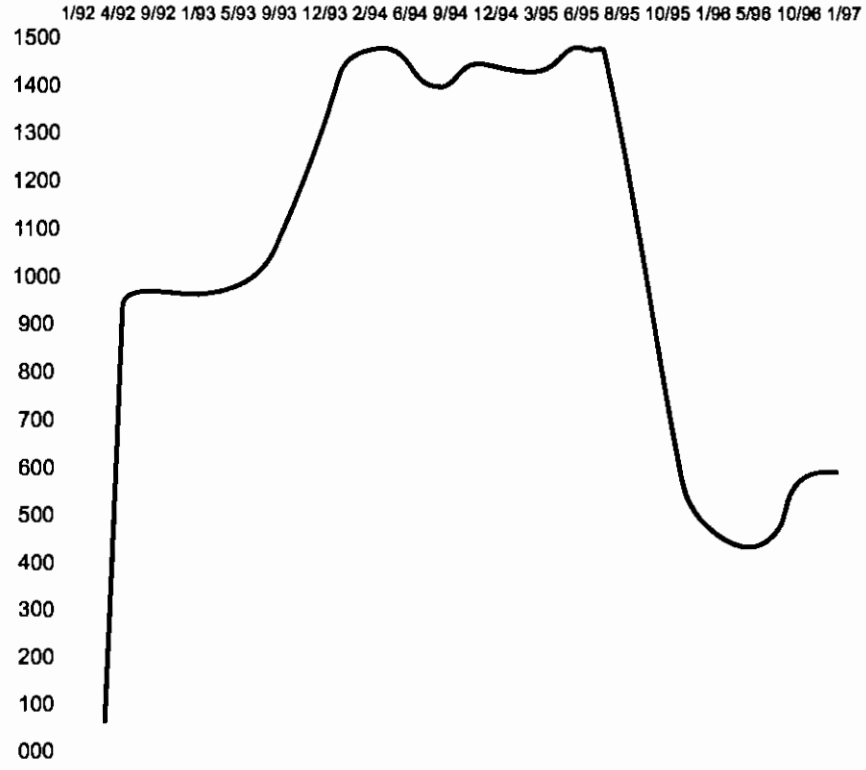
Two other Argentine contributions to peacekeeping and peace-observer missions deserve mention. One is the small contingent of observers sent to the Peruvian-Ecuadorian border in the wake of the 1995 outbreak of hostilities there. This non-UN mission resulted from the status of Argentina as a guarantor of a 1942 treaty that had ended an earlier conflict over the same territory, claimed by both nations. The operation (known as MOMEP, the Military Observer Mission Ecuador Peru) was multinational, with Brazilian, Chilean, Argentine, and U.S. observers. The other new mission, to which Argentina initially sent six observers, is the recently formed MINUGUA (UN Human Rights Verification Mission in Guatemala), established to monitor the new peace agreement in that country.

The Argentine commitment of military forces to UN peacekeeping operations has meant that from early 1994 until mid-1995, when Argentine contributions were at their highest, Argentina contributed about 2 percent of "blue helmets" at a time when UN forces were at their peak around the world. Thereafter, from mid-1995 to mid-1996, UN mission forces worldwide dropped by about half, in large measure due to the dissolution of UNPROFOR in favor of the Implementation Force (IFOR)—a Nato, not a "blue helmet," formation. The Argentine portion of all UN forces temporarily dropped to about one-third of its maximum size, but with UNTAES it stabilized at just under six hundred, including some eighty civilian police—or 2.4 percent of the total of nearly twenty-five thousand "blue helmets." The trend of Argentine participation in the post–Cold War era is shown in the figure; participation by mission, with comparable U.S. contributions (as of 31 July 1997) is shown in the table. Argentina and the United States each participate in about half of the seventeen current "blue helmet" missions.

Political and Military Effects

The employment of the Argentine armed forces in multinational peacekeeping and UN observer missions was a significant element of President Menem's internationalist foreign policy. As one scholar has noted, "The emphasis on UN peacekeeping also converges quite nicely with the government's overall strategy of economic liberalism and close political allegiance to the United States."[8]

Deployed Argentine Peacekeepers, 1992-1997



Source: *Peacekeeping and International Relations*, 1992-1997, passim.

The latest available figures (31 July 1997) show global Argentine contributions at 590 "blue helmets," or virtually unchanged from January.

Argentine participation in UN operations became a constant on the international scene in a wide variety of contexts. Argentina's "global reach" has achieved success not in terms of hegemonic pretensions or irredentist adventures—harking back to the old geopolitical imperatives—but of multinational, coalition efforts within the purview of international groupings and organizations, especially the United Nations. As Cyprus shows, Argentina can now be a full partner in this context even with a recent adversary.

Comparison of Argentine and U.S. Contributions to United Nations "Blue Helmet" Missions (as of 31 July 1997)

Mission	Argentina	United States	Location
UNTSO	3	2	Israel/Palestine
UNIKOM	45	15	Kuwait
MINURSO	1	15	Western Sahara
UNTAES	50	39	Eastern Slavonia
IPTF	62	228	Yugoslavia
UNPREDEP	1	498	Macedonia
UNFICYP	422	0	Cyprus
MINUGUA	(6)	0	Guatemala
UNOMIG	0	4	Georgia
UNMIH	0	47	Haiti
Total	584/(590)	848	

Source: *Peacekeeping and International Relations*, July–October 1997, pp. 18–19.

Notes: Total UN Peacekeeping/Observer Missions, 17; the source omits MINUGUA.

The military's new and important overseas mission can be counted as a domestic political plus as well. Along with other initiatives, it defused the military as a domestic political factor; this was significant, as political events in Argentina led to the unprecedented elaboration of a new constitution that permitted an incumbent to seek a second consecutive term. In 1995 Menem did so and won (terms now are four years instead of six, so Menem will likely serve a total of ten years, 1989 to 1999). He thereby achieved an opportunity for his internationalist policies to be accepted by the Argentine public as the appropriate long-term direction of the nation.

For the armed forces, the peacekeeping mission, with the commitment of personnel and resources to operations far from Argentina, is on balance very positive at both the individual and institutional levels. For the Argentine soldier,

sailor, airman, or marine, participation in UN peace operations has been highly beneficial. As noted above, Argentine military personnel enthusiastically signed up for the BEA because it meant far more generous compensation. But the benefits went well beyond that. Previously, only a very small fraction of Argentine military officers had ever served overseas, mostly as attachés, students, or procurement officers. Now there was an opportunity for a great many NCOs as well as officers to serve abroad. As an example, a single replacement cycle for the BEA in June 1993 involved fourteen field-grade officers, 113 junior officers, and 757 NCOs, for a total of 884.[9] Top-heavy on purpose and without untrained conscripts, the BEA and other Argentine peacekeeping units were drawn from the best the armed forces had to offer. Individuals in the BEA and other Argentine "blue helmet" contingents have served (and are serving) with military personnel from a wide range of other countries, in places far from somewhat isolated Argentina. Other countries' military professionals have formed a generally respectful regard for them; for example, an independent assessment comparing the contributions of Latin American countries rated Argentine peacekeepers quite good in most categories.[10] Perhaps even more importantly, as a result of these professional contacts, travel opportunities, new operational environments, and multinational operations, military service in Argentina is again seen, from within the armed forces and by the public at large, as honorable and prestigious.

From an institutional perspective, peacekeeping generally is perceived by the Argentine armed forces, like the government, as a net plus, producing benefits for the military and to the country. As do individuals, the Argentine military benefits financially from these commitments to UN service. Budgets continue to be tight for the Argentine public sector, and resources are severely constrained for the armed forces. Payments by the UN to Argentina for peacekeeping personnel, for the use of their equipment and consumables, and for other services under Letters of Assist (goods and services procured by national contingents but paid for by UN)—are highly welcome additions to salary, operations, and maintenance accounts. It should be pointed out that Argentine funds had to be used to stand up the contingents, give them initial training, and often to transport, field, and supply them in the first instance. Furthermore, UN reimbursement has not always been prompt; for example, as of the end of 1995 Argentina's military was owed a total of just under twenty million dollars.[11] Notwithstanding, Argentina should come out reasonably well financially.

The rewards in other respects to the Argentine military were substantial. As noted, peacekeeping provided a training and operational focus previously unavailable in Argentina, including regularly working with other military forces having the most advanced technology, best-developed doctrine, and extensive peacekeeping experience. Due to the frequent rotations, especially for the large

contingents in Croatia and Cyprus, significant proportions of Argentine officers and NCOs—approaching one-quarter or more of all those in the Army—have participated in a mission that enhanced the prestige of both the Argentine military and the country. Not incidentally, such commitments "showcase" the Argentine armed forces in a way no domestic mission or operation can, especially given the Argentine military's controversial history of internal security operations and political involvement.

Also, success in peacekeeping mitigates somewhat the lack of direct military participation in another high-profile mission that President Menem viewed as useful for his international aspirations and for cooperation with the United States: combatting illegal drugs. The military, barred from direct involvement in law enforcement and internal security operations by the National Defense Law passed during the Alfonsín administration, was reluctant to answer the antidrug call in a major way. It viewed combating illegal drugs as likely to lead to corruption of its personnel and a lessening of its capabilities in other areas. Because the government and the public are also uneasy about the armed forces taking on a high-profile internal mission, the military has managed to limit itself to supporting roles in the antidrug effort, leaving the Gendarmería Nacional (Border Guard), Prefectura Naval (Coast Guard), and federal and provincial police in the forefront. A recent accord reached with Brazil on bilateral efforts to combat illegal drugs implicitly affirms this supporting role for the armed forces of both countries.

Therefore peacekeeping is conspicuous as a high-profile if secondary mission that has generated substantial benefits. Nonetheless, peacekeeping on a large scale is not viewed within the military as entirely a good thing. There are two major reasons for these mixed views. First, the military has been, and is, intent upon preserving its primary mission of national defense—usually expressed now in terms of deterrence, as maintaining "credible deterrent capacity [sufficient to] discourage threats affecting vital interests."[12] "Subsidiary" missions, however worthy—including peacekeeping, combatting drugs, providing domestic disaster assistance, or maintaining the environment—must not compromise the primary mission.[13] The military does not want to replace that role with a set of collective, multilateral undertakings, a state of affairs that would strike at the heart of the military's corporate interests and reason for being.

Second, the peacekeeping mission was undertaken at a time when the armed forces, especially the Army, were seeking to restructure themselves, in large part to accommodate their changed circumstances under a civilian government intent on reducing the public sector. The outdated, dispersed, large-unit force that had long constituted the Argentine Army was being reconfigured into mostly mobile, rapidly deployable contingents, backed up by regionally positioned forces; the new structure would accommodate both the fundamental

deterrence mission and the greatly reduced resources available. The Navy and the Air Force were also being dispersed, but already having highly mobile assets, their problems centered more on operations, new or refurbished equipment, and maintenance.

This program would take time, and it was just as the restructuring plan was promulgated (in April 1992) that "the best and brightest" were being detailed to the United Nations for peacekeeping operations.[14] There was concern that Argentina might wind up with "two armies," one highly trained and supplemented by outside resources, the other a residual shell of the obsolescent territorial force. In the event, the restructuring has proceeded, if slowly; it costs money to restructure, too, and only meager funds have been available. Over time the peacekeeping veterans have leavened the home units, now manned by volunteers rather than conscripts due to Voluntary Military Service (Servicio Voluntario Militar), which began in 1995.[15]

Nonetheless, the simultaneous demands of restructuring and peacekeeping made apparent the need for formal training for peacekeepers within the Argentine military framework. The CAECOPAZ—Argentine Joint Peace Keeping Operations [PKO] Training Centre—was inaugurated by President Menem on 27 June 1995.[16] The mission of the Centre, operated by the Army at Campo de Mayo, is "to train personnel to perform tasks and/or duties as members of peacekeeping military organizations in order to meet requirements according to international agreements signed by the Argentine Republic."[17] Its goals are to fulfill Argentina's international commitments, train the Argentine military forces in the post–Cold War era's noncombat operations, test organizations and equipment under realistic and stressful conditions, and perform technical and professional exchanges with other armies, all in the interests of a stable and secure world. The Centre has sixteen classrooms, lodging for eighty-eight students, and other support facilities, including Army aviation.

Training is conducted in two ways, collective exercise (for contingents assigned to specific UN missions) and individual instruction in classroom settings. In 1996, the first full year of operations, the Centre trained 167 officers and NCOs in the individual format and 907 in the collective track.[18] In addition—and indicating the high level of interest by the United States in the Centre and in Argentine peacekeeping operations generally—CAECOPAZ hosted seven official U.S. delegations between November 1995 and October 1996.[19]

At the same time that CAECOPAZ was opening its doors, five countries (Argentina, Brazil, Paraguay, Uruguay, and the United States) came together for a peacekeeping staff exercise entitled Fuerzas Unidas '95. The event was hosted by Argentina at its Superior War College, with support from the United States. Each country sent a "battalion staff" of eight to ten officers to work through a

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peace-operations scenario. Each country also contributed two or three officers for a FUERZAS UNIDAS staff (corresponding to a UN mission headquarters). The overall commander in the first exercise was Argentine. The success of the initiative led to a second evolution in 1996 in Uruguay, with a Uruguayan commander. Brazil was designated the lead country for the third iteration in the summer of 1997.[20]

Implications for U.S. Policy and Operations

The emergence of Argentine peacekeeping capabilities and activities reveals not only a modified concept of roles and missions for the Argentine military forces but establishes Argentina as a major actor in multilateral efforts to monitor peace agreements and deal with breaches of the peace worldwide. Argentina is now seen as a regular contributor to UN peace operations, and the appointment of General de Vergara as the mission commander on Cyprus indicates that Argentina is considered able to take the lead in the UN framework. Also, the CAECOPAZ and FUERZAS UNIDAS initiatives make it the leader in Latin America in training future members of peace operations. The Argentine peacekeeping efforts have modified perspectives on security at both the regional and hemispheric levels, and the likelihood is that this will continue to be the case, particularly in the naval realm.

Although by no means the first country to deploy naval assets for a UN peacekeeping operations, Argentina has been conspicuously present in many of the more recent operations involving naval forces (in addition to the Gulf of Fonseca, noted above). Argentine naval deployments have played a significant role in support of UN peace operations in the Persian Gulf, Haiti, and Cyprus (the last-listed involving marines). It has often been the only Latin American country represented in UN or UN-sanctioned naval operations. These commitments clearly have strengthened Argentine–United Nations ties, and they have been in consonance with United States policy and efforts as well. Recent changes in Argentine naval force structure, particularly the decision to complete and commission two more MEKO 140 frigates and discard the aged aircraft carrier *Veinticinco de Mayo*, lend themselves to enhanced and continued participation by Argentina in UN naval peacekeeping operations. The Gulf operations and the Haiti embargo, for instance, employed frigate and destroyer-sized combatants extensively, and Argentina is prepared to assist in the future in such work.

The attention given in recent years by Argentina to extraterritorial missions has apparently also given it new impetus to seek accommodation within the Southern Cone region, through bilateral and multilateral defense cooperation. Argentina has sought closer ties with its neighbors. A possible MERCOSUR

(the Southern Cone Common Market) defense arrangement was alluded to by President Menem in his traditional armed forces friendship dinner message on 7 July 1997.[21] A meeting of the foreign ministers, defense ministers, and chiefs of staff of Argentina and Brazil to pursue the idea was arranged for the end of July 1997 at Rio de Janeiro to examine this and other issues.[22]

In the last year or so other initiatives have been made by Argentine defense and military authorities concerning Chile. Chile remains the major external security concern of Argentina, as evidenced by misgivings over planned bilateral military exercises with Chile in 1998 (misgivings reciprocated by Chilean authorities). Moreover, the recent lifting of long-standing U.S. restrictions on arms sales in Latin America, notably in the area of aircraft, has been perceived in Argentina as favoring Chile, at least potentially. Unlike Argentina, Brazil, and Uruguay, Chile has not made significant contributions to overseas peacekeeping or other multilateral missions.

However, in August 1997 the Argentine minister of defense, Jorge Domínguez, announced that Chilean officers will join Argentine peacekeeping forces on Cyprus under Argentine auspices, after being trained at CAECOPAZ. They will be stationed at Camp San Martín, near Skouriotissa, as have Brazilian and Uruguayan officers before them, and will be part of the UN peacekeeping mission headed by General de Vergara.[23]

All of these incipient changes in the Southern Cone reverberate in U.S. Southern Command (SOUTHCOM), the regional command for South and Central America and, now, the Caribbean. (Mexico, like Canada, remains outside the U.S. regional command system in the Western Hemisphere.) Southern Command is focused on "operations other than war," being less concerned with the prospect of major theater wars or warfighting per se, even in smaller-scale contingencies, than with nontraditional roles and missions. Always an "economy of force" theater, even during the Cold War and the Central American conflicts, SOUTHCOM has few military assets compared with the European or Pacific commands. It is now undergoing a restructuring (recently highlighted by the transfer of its headquarters from Quarry Heights, Panama, to Miami, Florida), and Southern Command assets today are fewer yet, even though its area of responsibility now includes ocean areas in the South Atlantic, South Pacific, and the Caribbean. Therefore the substantial participation of Argentina in peacekeeping and such naval exercises as UNITAS positions that nation as a significant player in hemispheric security, in collaboration with the United States and its neighbors.[24]

In fact, on 16 October 1997, during his visit to South America (Venezuela, Brazil, and Argentina), President William J. Clinton designated Argentina a "major non-NATO U.S. ally," a distinction enjoyed by only seven other countries in the world: Australia, Egypt, Israel, Japan, Jordan, New Zealand, and

South Korea. This unprecedented designation of a Latin American country stems in large part from Argentina's involvement in peacekeeping operations around the world and from the clear determination of the Menem administration to align itself with the United States in the Western Hemisphere and beyond. This is a historic departure from traditional Argentine foreign policy stances, which have been characterized by real or fancied rivalry with the United States for South American influence, à la Juan Perón after World War II; by studied neutralism, such as during World War I; or more recently, by nonalignment, in the Alfonsín administration (1983–1989). The extraterritorial use of the Argentine military has complemented the political and economic initiatives of Menem, at home and abroad, including privatization and the creation of MERCOSUR, and has helped establish Argentina's reputation as a reliable international partner.

Should this new pattern of relationships, civilian and military, persist, it will, to use an old Soviet term, change the "correlation of forces" in the Western Hemisphere and particularly in the southern part thereof. It will have lasting repercussions for regional arrangements and hemispheric cooperation, not only in the military sphere but in the broader web of inter-American relationships. Consequently, while Argentine military participation in UN peacekeeping operations may have originally been an effort to burnish the nation's international reputation and to reassert Argentina's role in the international arena, it has catalyzed something more: the arrival of Argentina as a partner in the international security arena, with a standing that Argentine governments could once only dream of. Argentina's new relationship with the United States—which lies at the core of its policy of foreign engagement—may finally give Argentina that "place in the sun" depicted on the Argentine national banner.

Notes

1. Buenos Aires, TELAM, 10 March 1996, in Foreign Broadcast Information System, FBIS-LAT-96-049, 12 March 1996, p. 45.

2. *United Nations Handbook*, 1989 (Wellington, N.Z.: Ministry of External Relations and Trade), pp. 40–2.

3. "Summary of Personnel Contributions to UN Peacekeeping Operations by Countries," *Peacekeeping and International Relations*, vols. 21–26, 1992–1997. Unless otherwise noted, all country contribution figures and numbers of personnel in UN missions come from this source. For UN "helmet color" usages, see Myron H. Nordquist, "What Color Is the Peacekeeper's Helmet?" *Naval War College Review*, Summer 1997, esp. pp. 9–13. (The full-length study of which the article is an extract and adaptation was published as Myron H. Nordquist, *What Color Helmet? Reforming Security Council Peacekeeping Mandates*, Newport Paper no. 12 [Newport, R.I.: Naval War College Press, 1997].)

4. *United Nations Handbook*, 1989, p. 41. The two UN missions were UNIIMOG (the United Nations Iran-Iraq Military Observers Group) and UNAVEM (United Nations Angola Verification Mission).

5. Juan Carlos Neves, "The Argentine Navy and UN Peacekeeping Operations in the Gulf of Fonseca," *Naval War College Review*, Winter 1994, pp. 40–67, esp. p. 48.

6. Deborah L. Norden, "Keeping the Peace, Outside and In: Argentina's UN Missions," *International Peacekeeping*, Autumn 1995, p. 332. For a discussion of the Argentine naval experience in the Persian Gulf,

see Juan Carlos Neves, "Interoperability in Multinational Coalitions: Lessons from the Persian Gulf War," *Naval War College Review*, Winter 1995, pp. 50–62.

7. *Clarín* (Buenos Aires) online (<http://www.clarin.com.ar/>), 17 February 1997, p. 1. General de Vergara also served as a deputy commander of the BEA in Croatia.

8. Norden, p. 334.

9. Martin Balsa [General, Argentine Army Chief of Staff], "Peacekeeping and the Inter-American Military System," interview by Jack Child, in *Peacemaking, Peacekeeping and Coalition Warfare: The Future Role of the United Nations*, ed. Fariborz L. Mokhtari (Washington, D.C.: NDU Conference Report, 1994).

10. Thomas S. Szayna et al., *Peace Operations Deficiencies: A Global Survey* (Santa Monica, Calif.: RAND, 1995). The categories were: general education (high), military proficiency (moderate to high), discipline (moderate to high), leadership (high), equipment (moderate to high), English language training (low, as was true for all Latin American contingents), special peace operations training (moderate), overall deficiencies minimal.

11. "Amounts Owed to Member States for Troops, Contingent-Owned Equipment, Goods and Services Provided under Letters of Assist and Death and Disability," *Report of the High-Level Open-Ended Working Group on the Financial Situation of the United Nations*, 9 April 1996. The amounts by category were: troops $8,703,000; contingent-owned equipment $8,572,000; Letters of Assist $2,275,000; total $19,550,000. Worldwide, the UN owed $1,080,530,000 in the first two categories and $280,766,000 for Letters of Assist and "death and disability."

12. Norden, p. 342.

13. Ibid.

14. *Verde Oliva* [bulletin of the Argentine Army], April 1992.

15. This change was announced by President Menem in a speech on 9 July 1994 in *Clarín*, 9 July 1994, in FBIS-LAT-94-150, 4 August 1994, p. 38.

16. Informational brochure, CAECOPAZ, n.d.

17. Ibid., and briefing slides used by CAECOPAZ (in English) in 1996.

18. Briefing slides, CAECOPAZ. The specific individual courses offered in 1996 were the Peacekeeping Operations Commander, Subunit Commander, and Junior Officer Course (five iterations, with students grouped by the mission to which they were going: UNTAES, UNFICYP, or UNIKOM); the Military Observers Course (one session for all); and Military Police, Radio Operator, and Helicopter Squadron courses for UNFICYP. Collective training was provided for the reconnaissance squadron (ECA) going to Eastern Slavonia (twice), the Argentine task force to Cyprus (twice), and an Argentine engineer company to Kuwait (once).

19. Ibid.

20. Lt. Col. Stephen C. Stacey, U.S. Army, interview by Herbert C. Huser, Armed Forces Staff College, Norfolk, Va., May 1997. Colonel Stacey was a participant and observer at Fuerzas Unidas '95.

21. President Carlos Menem, remarks as reported by TELAM, 8 July 1997, in FBIS-LAT-97-189 (<http://fbis.fedworld.gov> [hereafter online]), 8 July 1997.

22. Maria O'Donnell, "Defense Agreement for Mercosur Countries Considered," *La Nacion* (Buenos Aires, Internet version), 15 July 1997, FBIS-LAT-97-202 (online), 21 July 1997.

23. "Chilean Officers to Join Argentine Force in Cyprus," *Clarín*, 22 July 1997 (Internet version), in FBIS-LAT-97-217 (online), 5 August 1997.

24. For a discussion of this point from a Chilean perspective, see Edmundo Gonzalez, "U.S. Hemispheric Interests: A Bold Naval Agenda for the Twenty-First Century," in this issue.

Ψ

The African Crisis Response Force
A Critical Issue for Africa

Captain Derek J. Christian, South African Navy

"PRESIDENT CLINTON HAS APPROVED an ambitious plan to organize, train, equip and help deploy an all-African military force of 10,000 troops to intervene in that continent's recurrent crises, senior administration officials said."[1] This was how one newspaper described in September 1996 the U.S.-initiated concept of the African Crisis Response Force (ACRF). The idea had arisen from a United Nations "standby force" proposed by the then Secretary-General, Boutros Boutros-Ghali. The initial idea was to deploy such a force in Burundi under UN auspices to avoid a repetition of the violence that had erupted in neighboring Rwanda two years previously.

It soon became clear that this UN initiative was not going to succeed, and the United States began working on its own proposal. Its ultimate ACRF plan was meant to build on "ongoing peacekeeping initiatives and concepts, such as the UN's Standby Arrangements System; Organization of African Unity's (OAU) proposal that members voluntarily earmark troops for peacekeeping operations; Western European Union's (WEU) Joint Initiative on Peacekeeping and Conflict Resolution in Africa; conferences on Preventive Diplomacy and Peacekeeping; as well as numerous bilateral and sub-regional initiatives." Further, the ACRF was seen as "the most recent of several similar U.S. and international initiatives" to improve the capacities of regional peacekeeping forces.[2] Lastly, it was envisaged that the ACRF would be used in purely humanitarian crises that

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threatened mass civilian casualties, and that it would not intervene in any fighting.

The details of the initial concept were these.[3] The intended purpose of the ACRF was to seek a partnership between African states, the UN, the OAU, and others to build the capabilities of African militaries for responding to international crises. Its long-term objective would be to improve the international community's ability to react quickly to crises in Africa and elsewhere, as well as to develop the Africans' role in responding to crises worldwide. It would involve from five to ten thousand troops, African-led and manned, composed of a headquarters element, support units, and up to ten battalions. Its training and supplemental equipping would be jointly underwritten by the United States and other donor parties, particularly from the European Union. It would operate only under the auspices of the UN Security Council, in coordination with the OAU and appropriate subregional institutions. The proposal stressed that command and control arrangements would be the same as in present UN missions. Depending upon the mandate, the force could be used as a stand-alone unit or as part of a larger formation; alternatively, some of its individual components could participate in other UN-sanctioned operations in Africa or elsewhere. Start-up costs were estimated at between $25 million and $45 million; they would be borne by the United States and other donors. Once the ACRF deployed under UN auspices, the costs of a mission would be met by the UN, in accordance with its normal scale of assessments.

The response from European countries, the proposed partners for the financial backing of this force, was unenthusiastic, but the most surprising reaction was that of the very people the proposal was meant to help—the Africans themselves. Despite early expressions of strong interest by certain African countries, the overall response was not positive.[4] President Nelson Mandela of South Africa, whose country's support has been considered necessary if the proposal is to succeed, was reported as being "lukewarm" to the idea. Consequently, today the ACRF concept is in limbo.

This article will examine—from an African perspective—some of the issues raised by the ACRF and assess the feasibility of the proposal. Why did this U.S.-backed initiative falter? Should it, and can it, yet succeed?

Understanding "Humanitarian" Missions

The ACRF proposal refers to "humanitarian crises," but it does not specify the meaning of the term. It is therefore necessary to examine this concept further.

The types of operations mentioned as likely ACRF missions are among those typically conducted under the umbrella term "peace operations," which embodies especially peacekeeping. The term "peacekeeping" itself is often used to cover a multitude of "operations other than war." It is open to interpretation, and peacekeeping operations can have very different objectives. Accordingly, the military forces employed operate under rules of engagement that differ from mission to mission. The U.S. armed forces joint doctrinal publication on peacekeeping operations describes this state of affairs as follows: "There is no universally accepted definition of the term 'peacekeeping.' The absence of one specific definition has resulted in the term being used to describe almost any type of behavior intended to obtain what a particular nation regards as peace."[5]

With this in mind, U.S. doctrine sets out the relationship of peacekeeping to other "peace" operations.[6] It also establishes, for U.S. forces, the definitions of basic terms and concepts.[7] First, "support to diplomacy" involves three elements: *preventive diplomacy*, actions taken in advance of a foreseen crisis to prevent or limit violence; *peacemaking*, the process that arranges an end to disputes and resolves issues that led to conflict; and *peace building*, post-conflict actions that strengthen and rebuild governmental infrastructure and institutions in order to avoid a relapse into violence. "Peacekeeping," on the other hand, involves military operations undertaken with the consent of all major parties to a dispute in order to monitor and facilitate implementation of an agreement (cease-fire, truce, or other such agreements) and support diplomatic efforts to reach a long-term political settlement. Finally, "peace enforcement" operations are applications of military force to compel compliance with resolutions or sanctions designed to maintain or restore peace and order; they do not require the consent of the parties involved.

The term "humanitarian crises" is not included in any of these peace operations. Yet the reality is that a humanitarian crisis often precedes, and then becomes an integral part of, any form of peace operation. Certainly this has been the case in most of Africa's more troubled areas, such as Somalia, Liberia, Rwanda, and more recently the former Zaire. The terms "humanitarian crises" and "peace (or peacekeeping) operations" are therefore in most cases synonymous (except, significantly, for peace enforcement).

The implications of all this are profound for the ACRF. Despite carefully phrased guidelines referring to humanitarian crisis response, the ACRF will undoubtedly be used for peacekeeping operations and, just as likely, peace enforcement. It is important to acknowledge this connection, so African countries will be under no misconception as to how their forces will be used.

The History of Peacekeeping in Africa

The United Nations, the premier international organization, conducts peacekeeping operations on behalf of its member states. Let us examine the history and trends of UN peacekeeping missions, particularly those in Africa.

The United Nations. First, it is interesting to note that the UN's definition of peacekeeping is similar to, but not quite the same as, that of the United States. The UN includes the objective of "stopping or containing hostilities," which could be interpreted as overlapping with the U.S. concept of "peace enforcement."[8] The reality of the fifteen peacekeeping operations that the UN currently oversees worldwide supports this. The present operations include "observer groups" (in India and Pakistan), "a transitional administration" (in Eastern Slavonia), "peacekeeping forces" (in Cyprus), and "a civilian police mission" (in Haiti), to name but a few (see table). Yet all are placed under the gambit of "peacekeeping operations."[9]

The UN has started forty-four peacekeeping operations since its inception after World War II. Twenty-nine have been completed, having lasted an average of almost twenty-nine months. Two that were started in the 1940s (UNTSO, the UN Truce Supervision Organization, in the Middle East; and UNMOGIP, the UN Military Observer Group in India and Pakistan) are still in progress. However, interestingly, the tempo of operations has increased since the 1940s, as shown in Figure 1.[10]

	Mission Name		
	MINURSO	**UNOMIL**	**UNAVEM III**
Area of Operation	Western Sahara	Liberia	Angola
Purpose	Monitoring of cease-fire agreements	Monitoring of cease-fire agreements	Assist in restoring peace between Angolan government and UNITA
Start Date	September 1991	September 1993	February 1995
No. of Contributing Countries Involved	28	10	33
No. of African Countries Involved	7 (25%)	2 (20%)	12 (36%)
Total Troops Involved	241	71	6,608
Total African Troops Involved	48 (20%)	23 (32%)	1,799 (27%)

Figure 1
Tempo as Percentage of Total Operations Conducted

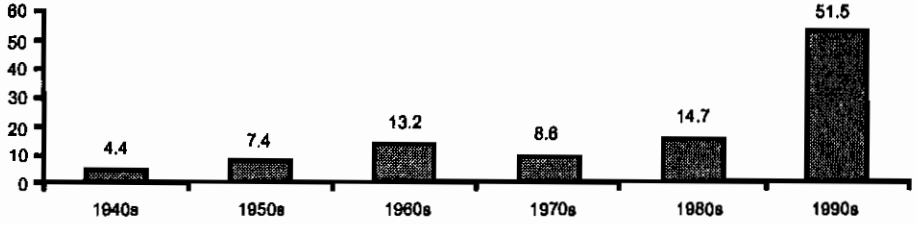
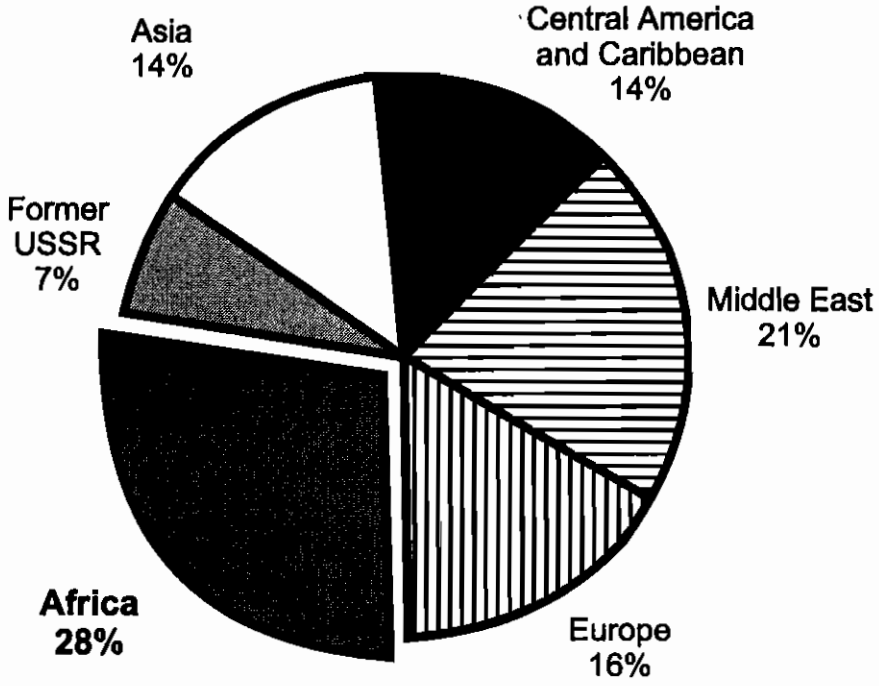


Figure 2
UN Peacekeeping Operations per Region
1947-1997



The regional allocation of UN peacekeeping operations is as depicted in Figure 2, which shows that the plurality of UN peacekeeping operations have been carried out in Africa. The fact that the tempo of operations is increasing indicates that there is a possibility that, proportionately, more and more operations will be needed in Africa. This is obviously a point for concern, and it is in itself a good reason for the region to start taking on its own responsibilities with regard to peacekeeping.

Of the fifteen current UN peacekeeping operations, three are in Africa.[11] When the relevant data are compared to those for past UN missions in Africa, one sees that the percentage of contribution by African countries is fairly consistent. Of the nine past peacekeeping operations that have been conducted under UN auspices in Africa, at least three have had a high international profile—Rwanda (1993–1996), Somalia (1992–1995), and the Congo (later and until recently "Zaire," in 1960–1964). In these cases, African countries have constituted 43, 27, and 37 percent, respectively, of the contributing countries.

These figures show that as far as UN peacekeeping operations are concerned, African countries have always been willing to contribute toward the overall operation. Although their resource contributions, especially troops and equipment, have varied from operation to operation, it is probably fair to say that they have contributed to the best of their abilities. Obviously there are instances where resource-rich countries have contributed the bulk of the support—the United States contribution in Somalia being an example.

The Organization of African Unity. Formed in 1963, the OAU has until recently dealt with interstate conflict in a system of ad hoc arrangements. The OAU left peacekeeping operations in Africa up to the UN, the OAU's charter requiring it not to intervene in the "internal affairs" of member states. Since the end of the Cold War, however, this stance has changed, and the OAU now acknowledges that the "problems of security and stability in many African countries [have] impaired the capacity of the OAU to achieve cooperation." A Division of Conflict Management was established in 1992, followed by a "Mechanism for Conflict Prevention, Management and Resolution," operating under the Organization's secretariat. The establishment of the Mechanism committed the OAU to close cooperation with the UN and subregional organizations within Africa. Amongst other things, the OAU intends to "have member states earmark forces in their respective armies and security structures for possible utilization in peace observation and peacemaking operations first and foremost by the UN and in exceptional circumstances by the OAU."[12]

The OAU has tried its hand at peacekeeping operations, but the results have not been positive. According to analysts Jakkie Cilliers and Mark Malan of the

South African–based Institute for Defense Policy, the OAU's very nature makes decision making problematic, and many African countries pay little more than lip service to its resolutions. They conclude that "peacekeeping in Africa by Africans can only work if it occurs in close collaboration with the UN and the international community."[13] William Thom, a professional Africanist with the U.S. Department of Defense, has a similar viewpoint. He argues that "international and pan-African attempts at peacekeeping/peacemaking will yield only marginal results until such efforts become more serious, more deliberate, and better supported." However, he acknowledges the effort that African countries are making in improving their peacekeeping abilities in Africa: "It is noteworthy that African states have increasingly been stepping forward to take responsibility for the security of their regions. Their ability to conduct peacekeeping and peace enforcement operations is also improving."[14]

The United States. Plainly, we must note the traditional reluctance of the United States to commit troops to UN peacekeeping operations. At the end of 1995, for example, there were 53,206 UN troops deployed in peace operations worldwide, of which the U.S. contribution was only 3,254, or 6.1 percent. Although the total number of UN troops deployed has since dropped, the contribution of the United States has become proportionally even less, standing at 3.3 percent at the end of March 1997.[15] When one considers the size and resources of the U.S. military, it is disturbing that this contribution should be so little. A possible answer lies in the "Somalia fiasco," where a huge United States contribution turned sour due to apparent UN command and control incompetence. Kenneth Allard puts it as follows: "The larger the peace operation, and the greater the likelihood of combat, the less likely it is that the United States will agree to surrender operational control of its forces to a UN commander. Participation of U.S. forces in operations likely to involve combat should be conducted *under the operational control of the United States, an ad hoc coalition, or a competent regional security organization* such as NATO."[16]

Unless there is a major policy shift, we must expect that the U.S. contribution of personnel to future UN or other multilateral peacekeeping operations over which it will not have direct operational command and control will be negligible. This should be an impetus to other countries and regional organizations involved in peacekeeping to ensure that their operational training for such missions is of the highest standard possible.

Political and Diplomatic Reaction to the ACRF

As noted, initial reaction to the American ACRF proposal was not favorable. First, although several European allies (not publicly named) have reportedly

agreed to support the proposal, France has been reluctant to do so. This is apparently in reaction to what France sees as an attempt to "muscle in" on what has traditionally been a French zone of influence.[17] Whether French support for the plan is critical or not is debatable. However, it does highlight the differences of opinion on the force proposal that exist amongst the major powers.

Of far greater importance, however, has been the reaction of the Africans themselves. Colonialism and the Cold War have left African states with a lingering suspiciousness of the intentions of Western powers concerning the continent. Africans also tend to be cynical concerning the commitment of the major powers to peacekeeping operations in Africa, when compared to such areas as the Persian Gulf or the Balkans. Inevitably, there is a certain level of skepticism about decisions made by outsiders. Unfortunately, the initial newspaper report on the ACRF did little to dispel this notion: "Neither the United States nor any European country is willing to commit its troops to get involved in African conflicts, officials said, so the fallback plan is to enable Africans to do the job."[18] An obvious interpretation by some Africans was that the United States and Europe were attempting to abandon Africa, which placed the integrity and even the sincerity of the proposal in question.

On the other hand, it is difficult to pinpoint exactly why the African reaction has been so negative in this particular case. As already mentioned, the OAU's Mechanism for Conflict Prevention, established in 1992, talked of "capacity building" in dealing with peacekeeping operations. It spoke also of member states "earmarking forces" for peacemaking operations, and of financial assistance from the United States to construct an OAU "situation room." Since 1994 at least, the United States has made it a stated policy objective to support efforts to improve regional organizations' peacekeeping capabilities.[19] This policy was affirmed in a 1996 report to Congress by the Secretary of Defense: "The United States does not seek to resolve Africa's many conflicts but rather to empower African states and organizations to do so themselves."[20] The OAU and other subregional groups in Africa have made progress in recent years in addressing regional security concerns.[21] Cilliers and Malan are emphatic: "The only feasible scenario for keeping the peace in Africa is the creation of an internationally sponsored UN rapid reaction force *essentially manned by Africans.*"[22]

The United States, for its part, has a record of contributing funds to general peacekeeping operations, including those in Africa, beyond those the nation makes to the UN. Of the 1997 estimated $70 million in this U.S. peacekeeping operations account, $13 million (18.5 percent) is scheduled for Africa and the OAU (the rest is budgeted for the Baltic countries, Haiti and Sinai operations, and others).[23]

Why, then, such continuing suspiciousness on the part of the African states? It would seem to be misplaced, and it may in fact be receding. Newspaper reports of early 1997 indicated a shift in the African camp. This was probably, at least in part, because the new UN Secretary General, Kofi Annan, himself an African, pushed the concept during a trip to several African countries, when he was quoted as saying that the "situation had evolved quite considerably since the Americans first put it forward."[24] Also, in early 1997 South Africa, Zimbabwe, and other Southern African Development Community (SADC) countries completed a regional peacekeeping exercise in Zimbabwe as part of an attempt to establish an "African Peacekeeping Force."[25] The Deputy Secretary General of the OAU, Ahmed Haggag, has indicated that the OAU would like to have further consultations with its members before announcing any ideas on the proposal—which can be interpreted to mean that the OAU is at least considering the idea, in itself a positive sign.[26]

The Feasibility of the ACRF Proposal

An important issue needs to be addressed: What exactly will be required of the ACRF? Will it be a permanent "stand-by" force, as suggested by the previous UN Secretary General, or will it be ad hoc, called together when required? If ad hoc, does it make sense to spend $25 million in creating and training this force, only to have it disperse indefinitely?

Since January 1989, UN peacekeeping operations have operated continuously in Africa, with scenarios involving differing levels of conflict. Assuming that this tendency continues, there is a very real chance that an ad hoc force, once called together, would effectively become permanent. The implications of this for African countries are enormous. For example, would other UN forces supplement the ACRF at periodic intervals, and who would decide when? Would African countries be expected to contribute forces simultaneously to other UN missions, or would they be excused from other international commitments? Would operational control remain with the UN, or would it devolve to the OAU? Would there be some form of "selection" for entry into the ACRF, or would all OAU members be involved? These questions are not meant to be exhaustive, but they are some of the issues that would need to be addressed before bringing the ACRF into being.

An important point that has not been pursued is the long-term financial feasibility of this proposal. Peacekeeping operations in 1994 cost the UN an estimated $3.8 billion, of which the African operations cost $1.5 billion, or almost 41 percent. Admittedly, these figures are skewed by the enormously expensive UN operations in the Balkans ($1.9 billion) and Somalia ($1 billion),

but the possibility of future operations of such financial magnitude cannot be ruled out.

Although the UN will finance actual deployments, simply maintaining peacekeeping forces at a certain level of preparedness is a costly business. Take Nato as an example of a successful regional organization (albeit a highly sophisticated one): the member countries spend on average $670 per person on defense, with the poorest, Turkey, spending $98 per person.[27] There are no comparative figures for Africa generally, but as an example, for the largest economic power in Africa, South Africa, the equivalent figure is only $58![28] The 1993 per capita gross national product (GNP) figures for three African countries that regularly contribute a large percentage of African troops to UN peacekeeping operations (Zambia, Ghana, and Zimbabwe) were $370, $430, and $540 respectively (compared to the 1995 figures for the three "poorest" Nato countries: Turkey, $2,682; Portugal, $10,456; and Greece, $10,670). In 1993, forty-two of the fifty-four independent African countries had GNPs per capita of less than a thousand dollars, including Mozambique, the world's poorest country, at $80.[29]

It can be argued that among the reasons Nato is successful is the wealth of its member countries, and therefore their ability to contribute financially to the organization. If economic well-being is indeed a factor, then it is doubtful whether the African countries by themselves will be able to maintain anything close to an effective permanent stand-by force, even excluding high-technology equipment. This reasoning and these figures are not meant to suggest that the ACRF should be anything like Nato. Rather, they show the huge economic disparity between countries involved in one highly successful regional force and the states that might be involved in another, and they suggest the implications of this disparity. With all the will in the world, the African countries simply do not have the economic capacity to form any sort of effective, long-term military body. This in turn implies that extra-regional funds will be permanently required. If not, the ACRF will have no choice but to remain an ad hoc force, assembled only for crises.

The African Crisis Response Force is a well-meant proposal that became entangled in the sensitivities of international politics. As is often the case at an international level, the original intention of the project was probably obscured by a combination of misunderstanding, lack of insight by all parties, and "hidden agendas."

That there is a definite need for this type of force is without question. Africa has been the focus of much of the UN's peacekeeping efforts in the past, and this will probably continue into the future, at least in the short and medium terms. The ACRF proposal builds on concepts raised by several players involved in international peacekeeping operations, including the UN, the OAU, and

defense strategists and analysts. Recent international events show a discernible trend towards bringing regional organizations into peacekeeping operations. As it is, several African countries have been involved in many UN peacekeeping missions, both in Africa and elsewhere.

As has been the case in the past, and despite theoretical distinctions between the terms "humanitarian crises" and "peacekeeping (or peace) operations," in practice (especially in Africa) such activities have been coterminous. Although the proposal calls for the ACRF to be used for "humanitarian crises," it will de facto be a regional peace enforcement/peacekeeping force. This is very important for participating states and the OAU to recognize, even if it is not openly acknowledged, inasmuch as the most benign ACRF operations will intrinsically impose political values.

It is uncertain how much the African countries by themselves will be able to contribute financially to the ACRF, other than money already set aside for UN peace operations. This in turn implies that external organizations or stakeholders, such as the UN or the United States, will of necessity continue to be involved in various ways. The ACRF can not be imagined, much less portrayed, as a way for others to abandon—even in part—the half-billion people of Africa.[30]

In general, there seems to be sound reasoning behind the idea of an ACRF. Intuitively, one can expect that a regional peacekeeping force would be more highly motivated than a foreign one might be in the execution of its mission. It should be more familiar with the circumstances causing the problem and it should have a vested interest in ensuring that the crisis is solved as quickly as possible. Furthermore, any action that improves the capacity of African countries to counter the scourge of humanitarian problems that have plagued the continent must be given maximum encouragement.

Ultimately, the success of the proposal will depend on whether Africans accept ownership of the idea or not. Very probably, however, this is merely a question of time—a case of "when" and not "if." Such an assessment is encouraged by the shift that seems to have taken place in African thinking since the beginning of 1997; more positive coverage has been given to the idea, and the continent's leaders have risen to higher responsibilities.

Finally, as issues are endlessly debated in the international arena while innocent people continue to suffer, all parties would do well to focus on these words of John F. Kennedy: "The goal of a peaceful world must, today and tomorrow, shape our decisions and inspire our purposes."[31]

Notes

1. Thomas W. Lippman, "U.S. Presses for All-Africa Crisis Force," *Washington Post*, 28 September 1996, p. 1.

2. U.S. State Department Briefing at George Mason University, "African Crisis Response Force Concept," <http://ralph.gmu.edu/cfpa/peace/acrf/fact.html>, 22 October 1996.

3. Briefing at George Mason University.

4. Lippman, p. 1.

5. U.S. Joint Chiefs of Staff, *Joint Tactics, Techniques, and Procedures for Peacekeeping Operations*, Joint Publication 3-07.3 (Washington, D.C.: 1994), p. A-1.

6. U.S. Department of the Army, *Peace Operations*, Field Manual 100-23 (Washington, D.C.: 1994), p. 2.

7. U.S. Joint Chiefs of Staff, *Joint Doctrine for Military Operations Other Than War*, Joint Publication 3-07 (Washington, D.C.; 1995), p. III-12.

8. "United Natioos Department of Peacekeeping Operations," <http://www.un.org/Depts/DPKO>.

9. "Comprehensive List of UN Peacekeeping Operations," *United Nations Peacekeeping Operations Homepage*, 28 February 1997, <http://www.fib.ethiz.ch/fib/pko/allops.html>.

10. "Comprehensive List of UN Peacekeeping Operations." The "tempo" is calculated by adding the existing operations to the new ones started in a particular decade. It is reflected as a percentage to show the increase in peacekeeping operations in the 1990s. Note that this graph does not reflect the duration of operations per se, nor does it reflect the size of personnel commitment.

11. "Comprehensive List of UN Peacekeeping Operations."

12. Jakkie Cilliers and Mark Malan, "South Africa and Regional Peacekeeping," *CSIS Africa Notes*, August 1996, p. 1.

13. Ibid., p. 8.

14. William G. Thom, "An Assessment of Prospects for Ending Domestic Military Conflict in Sub-Saharan Africa," *CSIS Africa Notes*, October 1995, p. 3.

15. United Nations Department of Public Information, "Monthly Summary of Troop Contributors to Peacekeeping Operations," 31 March 1997. This figure does not include operations such as those in the former Yugoslavia—that is, a U.N.-approved Nato deployment—or other instances in which U.S. forces conduct peace operations but remain under national control.

16. Kenneth Allard, *Somalia Operations: Lessons Learned* (Washington, D.C.: National Defense Univ. Press, 1995), p. 5 (emphasis supplied).

17. Thomas W. Lippman, "Africa Force Plan Revised," *Weekly Mail & Guardian* (Johannesburg) 14 February 1997, p. 1.

18. Lippman, "U.S. Presses For All-Africa Crisis Force."

19. Joint Military Operations Department, "The Clinton Administration's Policy on Reforming Multilateral Peace Operations," NWC 2187 unpublished course reading (Newport, R.I.: U.S. Naval War College, May 1994).

20. U.S. Secretary of Defense, *Annual Report to the President and the Congress* (Washington, D.C.; March 1996), p. 4.

21. Thom, p. 5.

22. Cilliers and Malan, p. 8 (emphasis supplied).

23. U.S. State Department, *Congressional Presentation for Foreign Operations—Fiscal Year 1997*, p. 166.

24. "Annan Moots International Intervention Force," *Weekly Mail & Guardian*, 21 March 1997.

25. Ibid., April 1997.

26. Lippman, "Africa Force Plan Revised," p. 1.

27. U.S. Department of Defense, *Report on Allied Contributions to the Common Defense* (Washington, D.C.: 1996), p. A-25.

28. Based on the 1997/8 South African defense budget, an estimated total population of forty-two million, and current exchange rates.

29. Madeline Lass, ed., and Pieter Esterhuysen, comp., *Africa at a Glance* (Pretoria: Africa Institute, 1995), p. 44.

30. "Perhaps the most dramatic way of expressing this difference is to note that in 1950 Africa's population was half of Europe's, by 1985 it had drawn level (at about 480 million each), and by 2025 it is expected to be three times Europe's (1.58 billion to 512 million)." Paul Kennedy, *Preparing for the Twenty-First Century* (New York: Random House, 1993), p. 24.

31. William Safire and Leonard Safire, eds., *Words of Wisdom* (New York: Simon and Schuster, 1990), p. 276.

Ψ

The Dardanelles Campaign

A Historical Analogy for Littoral Mine Warfare

E. Michael Golda

EFFECTIVENESS IN FIVE WARFARE ELEMENTS is necessary for the United States Navy to achieve the maritime dominance discussed in the strategic vision of littoral warfare, "Forward . . . from the Sea": surface warfare, undersea warfare, amphibious warfare, combat logistics, and mine warfare.[1] The first four elements became mainstays of the U.S. Navy during World War II. The fifth element, mine warfare, has been elevated from its traditional, often neglected, supporting role. The Navy has started to make significant improvements in its mine warfare capabilities, guided by the lessons learned in DESERT STORM and the requirements of the new amphibious maneuver warfare concept, "operational maneuver from the sea."[2] A Mine Warfare Command has been created. A substantial research and development effort has begun to address technological shortfalls.[3] Senior Navy and Marine Corps mine warfare leaders have initiated a "campaign plan" to develop a common vision to guide the integration of all mine warfare efforts.[4] Yet the Navy has no adequate example to display the strategic importance of mining in war.

"Historically, the Navy has quite correctly associated the development of only minimal MCM [mine countermeasures] capability as less risky than limiting other warfare areas."[5] That estimation is no longer correct. The sea-mine threat is proliferating at the same time the U.S. Navy is preparing for increased littoral

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operations. In 1992 the Office of Naval Intelligence reported that more than forty-five nations had sea-mining capability and that at least twenty-three "are known to be capable of producing mines."[6] Failure to correct the traditional low-risk perception of mine warfare traditionally held by the Navy could have strategic consequences. Indeed, only when naval officers recognize that an enemy's mines can be more than an inconvenience, more than an embarrassment, and more than a tactical impediment will the U.S. Navy comprehend that in an age of littoral warfare mines are *strategic* weapons.

Education will play an important role in establishing mine warfare as a fundamental element of maritime dominance. Naval officers must not only understand the increased magnitude of the threat that sea mines pose to their ability to conduct littoral operations but also take the steps necessary to improve mine warfare capability. The leadership of the Navy's mine warfare community is trying to create a new attitude among operational commanders—that mine warfare is an integral part of littoral warfare.[7] This change in attitude was supported in a white paper by Admiral Jeremy Boorda, writing as Chief of Naval Operations.[8]

Historical analogies can be a valuable tool in the educational process. They demonstrate important trends and lessons that result from the connected happenings that make up the Navy's past.[9] Such analogies are already a significant part of a naval officer's education. As the armed forces of the United States reorient their missions after the Cold War, historical models are routinely incorporated as illustrative examples in both high-level guidance and doctrine. Examples include the chapter "Joint Campaigning in the Solomons, 1942–1943" in Joint Publication 1, and those entitled "The Battle of the Atlantic: Using Attrition Warfare" and "Midway: The Principles of War Applied at Sea" in Naval Doctrine Publication 1.[10] Selection of appropriate historical analogies was an integral part of the development of the concept of maneuver warfare, and it remains prominent in current discussions and formal instruction.[11]

This article addresses the question, What would be an appropriate historical analogy for littoral mine warfare? First we examine the fundamental characteristics of a useful mine warfare analogy; next we discuss the shortfalls of the traditional U.S. Navy littoral mine warfare models. Finally, we review the Royal Navy's Dardanelles campaign as a more relevant analogy, useful for study and discussion within the United States Navy to make mine warfare an integral warfare element in littoral operations.

Characteristics of a Littoral Mine Warfare Analogy

At the most general level, a useful historical analogy broadens the general perspective of naval officers about the importance of mine warfare, raising their

professional competence. At a more practical level, it offers a model against which to evaluate a proposed course of action. A valid analogy helps to define the situation and test presumptions, helping a service arrive at the best possible choices in its mine warfare efforts.[12]

To be useful, a historical analogy must reflect six characteristics of mine warfare in the littoral as the U.S. Navy is likely to conduct it. The first four arise from the world order, current and projected fleet capabilities, anticipated capabilities of potential adversaries, and the new strategic and tactical concepts guiding the Navy. The fifth proposition addresses the risk that mine warfare poses to littoral operations. The final factor has to do with the impact of littoral mine warfare on the exercise of command.

Littoral operations involve limited naval forces, with modest resources. With the downsizing of the U.S. Navy and the probability of further reductions in defense funding, it is reasonable to assume that the Navy of the future will be constrained in the resources it can bring to bear in a littoral operation. Even if the current "come as you are" emphasis (with its adverse mobilization and reconstitution implications) is reversed politically, choices have already been made that will affect force structure into the far term.

Political leadership and military command are closely linked. A cornerstone of the United States government is civilian preeminence. The president, assisted by the secretaries of defense and state and by the National Security Council, formulates national security policy and makes the decision to use military force. The operating forces of the United States are assigned to the unified commands responsible for specific geographic areas or missions. When military force is employed, the chain of command runs from the National Command Authority directly to the commander in chief of the appropriate unified command. The role of civilian authority was further strengthened by the Goldwater-Nichols Department of Defense Reorganization Act of 1986.[13] Future littoral operations will be conducted under close civilian oversight; continued improvements in communications technology will strengthen civilian authority even further.

Littoral naval engagements are asymmetric. Although the U.S. Navy will have modest resources (by its own historical standards), it is unlikely that any potential adversary will be able seriously to contest control of the littoral "battlespace" using conventional naval forces.[14] Therefore, future littoral actions will be battles between forces which are quantitatively dissimilar.

Minefields are defended. Mines are a simple and economical means of contesting littoral waters, but they are only one component of an effective littoral defense against power projection from the sea. "It is those maritime and land mine fields close in and ashore, covered by observation and fire and designed to supplement rather than be the defense, that are the true challenge of littoral MCM operations."[15] This was, for instance, long-established Soviet naval

doctrine.[16] A determined adversary who has prepared in advance, adopting an appropriate doctrine that maximizes the effectiveness of his military resources, could disrupt operational maneuver from the sea.

Mine warfare operations can have significant effects on strategic outcomes. An educationally valuable historical analogy must incorporate the fundamental characteristics of a situation in a way that clearly demonstrates the high level of risk associated with littoral mine warfare.

A littoral mine threat can hinder the exercise of command. Command and control is crucial to the success of any naval operation, and a useful historical mine warfare analogy should highlight the impact a mine threat can have on a commander under the stress of combat.

Traditional Historical Littoral Mine Warfare Analogies

The episodes from American history most commonly cited as mine warfare analogies are Mobile Bay (1864, during the Civil War) and Wonsan, North Korea, in 1950. However, both of these events fail to meet at least one of the six characteristics we have listed.

In the former case, the Confederate defenders of Mobile, Alabama, a port city on the Gulf of Mexico, had at least seven months' warning, during which period Rear Admiral David Farragut was collecting the vessels he would need to make an assault. By the time he was ready, in August 1864, the defenses were at their strongest; they included a triple line of mines (known then as "torpedoes") between, and defended by, forts on either side of the single deep-water channel into Mobile Bay. The small Confederate naval force, an ironclad and three light gunboats, was outgunned 159 guns to sixteen by the eighteen Union ships—certainly a numerically asymmetric engagement.[17] Prior to the assault, Farragut directed a careful reconnaissance of the Confederate defenses to mark the minefields. His operational order clearly established that in self-protection "the vessels will take care to pass eastward of the easternmost [marker] buoy."[18] The failure of the commanding officer of the USS *Tecumseh* to follow this direction resulted in the loss of his ship and a failure of nerve on the part of the commanding officer of the USS *Hartford*. Admiral Farragut's "Damn the torpedoes!" can probably be attributed less to reckless boldness than to frustration with his subordinates, which made it necessary to exercise command constantly to achieve his objective. Farragut's force destroyed the Confederate naval squadron and captured Mobile's defenses within twenty-four hours.

Mobile Bay, however, is a poor historical mine warfare analogy. There was no direct linkage between the political leadership and Admiral Farragut. The campaign aimed at no significant outcome: "The city's importance to the Union had already passed, for Mobile was no longer needed as a Union base for a land

campaign."[19] Moreover, the common misconception that Farragut's famous command reflected a "heroic" disregard for mines eliminates the episode's usefulness for present purposes.

For the Wonsan case, the necessary background is that the North Korean offensive that began in the summer of 1950 had been reversed by the amphibious assault of United Nations forces under the command of General Douglas MacArthur at Inchon on 15 September 1950, "a triumph of joint operations in the most difficult circumstances."[20] After Inchon, the North Korean collapse appeared to offer the possibility of unifying the Korean peninsula. With the concurrence of the Joint Chiefs of Staff, General MacArthur planned an encirclement of the retreating North Korean forces. One U.S. Army corps would advance up the west coast; a second force (made up primarily of the 1st Marine Division) would conduct an amphibious landing on the east coast, at Wonsan, and then drive across the peninsula, cutting North Korea in half.[21]

The few mine countermeasures units that reached the operational theater after the Inchon landing began operations ten days prior to the amphibious assault on Wonsan, sweeping a thirty-mile channel to the landing beach. There had been little advance reconnaissance, the planners believing that the relatively few mines present would be found in the harbor's choke points. The mine countermeasures forces were "stunned" when minefield reconnaissance finally revealed that the North Koreans, under the direction of Soviet advisors, had laid more than three thousand mines over four hundred square miles in approximately three weeks.[22] When magnetic-influence mines were encountered, the landing force of nearly twenty-nine thousand troops was kept at sea aboard the seventy-two ships of Joint Task Force 7 for six extra days.[23] By the time the Marines finally came ashore, Wonsan had already been taken by South Korean troops, and Bob Hope was performing there for the U.S. Army.[24]

Wonsan, too, is a poor historical analogy for mine warfare. In this case there was an engagement of a U.S. Navy task force with limited resources against defended minefields. However, once again, the mine warfare operations did not have a significant effect on the campaign, nor could they have had. Also, the fact that other forces already ashore were able to achieve the objectives at Wonsan minimized any challenge the mine threat might have posed to the exercise of command.

Within its own littoral mine warfare experience, then, the United States Navy has no example that conclusively demonstrates the need to make mine warfare a coequal and fundamental warfare element in the Navy's littoral operations. As a result, the Navy's traditional response in dealing with littoral mine threats has been a short-term flurry of activity. Nothing has justified the value or necessity of sustained support of mine warfare as a primary warfare element. Senior naval

officers who have recognized the magnitude of the mine threat and have attempted to alter the status quo have met with little long-term success. Often their efforts have been reduced to memorable quotes, as the Navy procurements they helped initiate of mine countermeasures ships and equipment failed to receive the continued budgetary support necessary to maintain an increased capability in mine warfare.[25]

We must therefore broaden the scope of the search to the experiences of other navies. The Royal Navy's Dardanelles campaign comes immediately to mind as a compelling example of littoral mine warfare, one that meets all six of our criteria. The failure of the Royal Navy in this littoral mine warfare operation not only lost the campaign but directly affected the course of World War I. It has had an impact on history that is evident even today. What should U.S. Navy officers learn from the Dardanelles case to help them conduct future littoral operations?

The Dardanelles Campaign, 1915

Failure of British diplomacy resulted in a treaty between Germany and Turkey, signed on 2 August 1914, that gave the Germans de facto control of the Dardanelles, the long and narrow passage between the Aegean and the Sea of Marmara (which is connected in turn to the Black Sea by the Bosporus). The Turks began mining the Dardanelles on 3 August, and the pace of their work accelerated when Rear Admiral Wilhelm Souchon of the German navy (who had commanded the cruisers *Goeben* and *Breslau*, "purchased" by the Turks after evading British patrols in the Mediterranean and arriving in Constantinople on the 13th) was appointed commander in chief of the Turkish navy on 15 August 1914. On 27 September the Turkish commandant responsible for the defense of the Dardanelles closed the strait by completing the minefields.

The Turks used the word "fortress" to describe their defenses, which consisted of outer, intermediate, and inner forts on both sides of the strait. The reality was quite different. Rear Admiral Souchon found poorly trained Turkish gunners with out-of-date equipment (old guns of different types and caliber, with poor range finding, fire observation, and control). He requested additional support, and approximately four hundred German naval artillerymen and mine warfare experts under the command of Vice Admiral Guido von Usedom were dispatched to Turkey.[26] These men were integrated into the Turkish service, with the concurrence of Kaiser Wilhelm II, in order to maintain the appearance of Turkish neutrality. Von Usedom's Turkish military title was "Inspector General of Coastal Fortifications and Minefields." The actual command of the Dardanelles was given to another German vice admiral, an artillery expert who

had accompanied Von Usedom to Turkey; his Turkish title was "Inspector of Coast Artillery."[27]

During their initial inspections the Germans found that the shortage of large-caliber ammunition was so severe that, as Von Usedom reported in October 1914, there was only enough on hand to meet one major assault. Von Usedom determined that "he must trust mainly to the minefield for the protection of the Straits."[28] He expanded the initial Turkish mining effort, creating a defensive minefield of 343 mines in ten lines. The minelines were spaced at fairly regular intervals over the ten-thousand-yard approach to the narrowest part of the Dardanelles. The mines were defended by the fixed guns of the intermediate forts and by mobile artillery.

In Britain, the War Cabinet approved in December an operation to open the Dardanelles using only naval forces. Several factors had led to this decision. First, members of the cabinet, including the First Lord of the Admiralty, Winston Churchill, had become dissatisfied with the nation's commitment to a war of attrition in the trenches of France that did not attempt to take advantage of the mobility offered by the Royal Navy. Second, in Russia a lack of war materials (as well as major setbacks in battle) was preventing the numerical advantage of the Russian military from being used to help overcome the stalemate on the Western Front. In turn, the British Empire was faced with food shortages that could be partially alleviated by Russian wheat. Finally, more than 120 allied merchant ships were trapped in the Black Sea, exacerbating a shortage of shipping. The Secretary of State for War, Field Marshal (and Earl) Horatio Kitchener, argued that a successful naval attack on the Dardanelles would be equivalent to winning a campaign; also, the forces could be easily disengaged at any time if progress was unfavorable.[29] Prime Minister Herbert Asquith agreed: "One must take a lot of risks in war. . . . Forcing the Dardanelles . . . presents such a unique opportunity that we ought to hazard a lot elsewhere rather than forgo it."[30]

On 3 January 1915 Churchill queried Admiral Sir Sackville Carden, commanding the combined British and French battle squadron in the Mediterranean, "Do you consider the forcing of the Strait by ships alone a practicable operation? Importance of result would justify severe loss."[31] The resulting plan was for the Royal Navy to force its way through the strait by destroying the Turkish defenses, which would also require clearing the minelines defended by the intermediate forts. Admiral Carden received additional battleships to optimize his force for coastal bombardment, but his total resources (in both ships and logistics) were few.

Royal Navy operations commenced on 19 February 1915. The outer forts were silenced on 25 February, but only after a delay of five days due to bad weather. The weather then caused another several days' interruption. On 1 and

2 March the Royal Navy attempted to bombard the intermediate forts at long range from outside the minelines. Before bad weather again halted operations on 3 March, Admiral Carden had become extremely concerned about the higher than anticipated rate of expenditure of ammunition and by ineffective seaplane spotting of the fall of shot. On 9 March he reported to Churchill that the force would concentrate on clearing the mines. The inner forts could not be reduced by long-range fire, and the battleships could not approach close enough to ensure their complete destruction until the mines had been swept.

The force's minesweepers were converted English trawlers manned by civilian fishermen. The trawlers operated in pairs about five hundred yards apart, sweeping with a single 2.5-inch wire and a one-ton, twelve-foot-long "kite" to regulate the wire's depth.[32] They were also fitted with steel plating for personnel protection. British minesweeping was ineffective on eight nights between 1 and 14 March; despite only minor losses, the trawlers repeatedly withdrew under harassing fire from the mobile batteries. Though civilian trawlermen, who formed the majority of the service's minesweeping crews, had done exceptional and heroic service clearing mines around England, they did not perform well under fire during night operations in the Dardanelles. The failure of minesweeping at night led Admiral Carden to plan a daylight action to silence the intermediate and inner forts and permit the minelines to be swept. The order was issued on 17 March by Admiral Sir John de Robeck, who had been second in command, Admiral Carden having been relieved due to ill health.

The operation commenced at 1130 on 18 March 1915. The battleships silenced the forts, and at approximately 1600 the trawlers moved forward to begin sweeping—only to withdraw again under fire from the mobile batteries, which had not been suppressed.[33] By the end of the afternoon the British and French had lost six battleships, four to mines and two to gunfire. The British thought the mine losses were due to floating mines, for which they had been unprepared, but the ships had actually been destroyed by a new and undetected mineline. A Turkish mine expert, Lieutenant Colonel Geehl, had chosen an area in which he had observed the battleships routinely maneuvering during earlier bombardments; a small Turkish freighter, the *Nousret*, had laid twenty mines during the night of 8 March, when the British picket destroyer had been forced off station by bad weather.[34]

Admiral de Robeck's after-action report stated that he intended to renew the attack within three or four days, after a reorganization of the minesweeping force. Under the forceful leadership of his chief of staff, Commodore Roger Keyes, the civilian crews were replaced by volunteers from the battleships' survivors, and modifications were begun to fit eight destroyers with minesweeping gear. The War Cabinet strongly endorsed these efforts, especially since

intercepts of German wireless communications indicated a serious shortage of ammunition in the forts.[35] Admiral Sir John ("Jackie") Fisher, the First Sea Lord, immediately dispatched two more battleships as reinforcements and instructed de Robeck, "It appears important not to let the forts be repaired or to encourage enemy by an apparent suspension of the operation."[36]

On 23 March Admiral de Robeck completely reversed his plan of action. After a conference with the senior Army officer on the scene (Sir Ian Hamilton), de Robeck proposed a joint operation in which the Army would secure the forts before the Navy tried to force a passage. Lord Fisher then changed his own position, refusing to challenge the judgment of the on-scene commander. Even with the support of Prime Minister Asquith and Lord Kitchener, Churchill could not get the cabinet to order de Robeck to renew the attack immediately. The decision to conduct a ground campaign led to the disaster known as Gallipoli.

The Usefulness of the Dardanelles Campaign Analogy

The essential characteristics of this 1915 episode match closely those of the kind of mine warfare that the U.S. Navy probably faces in the littoral, as we have listed them. First, it was a littoral action in which a limited naval force with modest resources was engaged. The combined British and French force consisted of the battleship HMS *Queen Elizabeth* (a super-dreadnought) and sixteen pre-dreadnought battleships, a battle cruiser, five cruisers, twenty-two destroyers, a seaplane carrier, and thirty-five minesweeping trawlers. The figures are impressive but misleading. The number of cruisers, destroyers, and submarines was much smaller than was needed to escort so many capital ships. This was due to threats to the British home waters from both the German High Seas Fleet and the recently declared unrestricted submarine campaign. There was also a nationwide shortage of large-caliber ammunition. Priority for such stocks as existed went to the Western Front; Admiral Carden and the First Lord had been concerned about this matter since the beginning of the operation. It was this shortage that produced the initial attempt to sweep mines at night, when the need for covering fire against the Turkish intermediate forts would be at a minimum. In addition, and as discussed, the minesweepers, though numerous, were not effective.[37]

Second, there was a close linkage of the political and military commands. To be sure, the substance of this linkage—the interaction between the British political and military leaderships on the options, risks, and potential rewards—left much to be desired; this aspect of the operation could serve as a useful (and negative) historical analogy of civilian control. For instance, the War Cabinet conducted business very informally; significant decisions were often reached

with neither rigorous debate nor thorough examination of political and practical issues. Also, though Fisher and the vast majority of the naval experts in the Admiralty had serious doubts about the technical feasibility of the campaign, Churchill did not forward any of those dissenting opinions. Moreover, the First Sea Lord, Fisher, although present at the meetings of the War Cabinet, did not voice his opposition, believing that military experts should only give that body their technical opinions when asked. Consequently, the Commission of Inquiry into the Operations at the Dardanelles, convened in 1916, concluded that "the stress laid upon the unquestionable advantages which would accrue from success was so great that the disadvantages which would arise in the not improbable case of failure were insufficiently considered."[38]

Whatever the shortcomings of the national decision-making process, however, the First Lord of the Admiralty and the First Sea Lord communicated frequently with Admiral Carden and his relief, Admiral de Robeck. By 18 March more than 350 official telegrams had been exchanged between the Admiralty and the on-scene commander, and their delivery was timely, taking only hours. Informal communication also occurred: for instance, when in late March Fisher declined to order a resumption of the attack, he did agree that Churchill could send a personal, unofficial telegram to de Robeck urging him to reconsider his decision. (Churchill sent this telegram on 24 March, but it failed to convince the admiral to resume the attack.)

Third, the engagement was numerically asymmetric. The sixteen British pre-dreadnought battleships were outdated only in that the caliber of their guns would make them ineffective against the German High Seas Fleet; they were entirely adequate for shore bombardment. The Turkish and German forces defending the Dardanelles certainly lacked what professional military officers of the era considered adequate resources. The head of the German military mission to Turkey reported at the end of February 1915 that the Turkish General Headquarters believed the strait would be forced. "Up to the 18th of March the majority of Turks and Germans alike continued to believe in the power of the Entente [Britain and France] to force the Straits with ships alone."[39] A German journalist reported that the German and Turkish defenders were surprised that the British did not immediately follow up the actions of 18 March; "They had made up their minds the Fleet would win, and they themselves could not have held out much longer."[40]

Fourth, the minefields were defended. The effectiveness of the German and Turkish defense of the Dardanelles was determined by a collection of critical factors, the concrete and intangible strengths and weaknesses of their force.[41] Although the forces were asymmetric and the defenders lacked adequate resources, the success of the defense was determined in large part by such intangibles as doctrine, leadership, will to fight, tenacity, and ingenuity. Due to

the limitations of the Turks' capabilities, the minefields became the primary component in the German tactical doctrine for the defense of the Dardanelles. The success of the Royal Navy in severely damaging the outer forts during a bombardment in November 1914 confirmed in the minds of the Germans and Turks the need to concentrate their future efforts on the inner defenses "and more especially on protecting the minefield."[42] The twenty-one large, fixed weapons guarding the straits were supplemented with forty-four field pieces. Mobile batteries supported by searchlights were set up to provide harassing fire on predefined areas against the minesweeping trawlers and barrages.[43] To prevent the British from accurately planning counter-battery fire, the batteries were brought to the shore at night and withdrawn at daybreak. By 3 March the defenders had further confused British planning by erecting a number of decoy batteries, "mostly discarded water mains."[44] The defenders also increased the difficulty of accurately spotting their fixed positions from long range, camouflaging the battery revetments by painting black, cross-hatched patterns and building earth embankments as decoy revetments.[45] Unable either to obtain additional mines from Germany or produce them in the limited Turkish industrial base, the defenders supplemented their mine stocks by retrieving floating mines set adrift by the Russians near the mouth of the Bosporus to harass Turkish shipping. The minelines were routinely inspected, and mines swept by the British were replaced with the Russian ones.[46]

The intangible critical factors of the defense had a significant influence on Admiral de Robeck. In his testimony to the Commission of Inquiry he stated, "I think it was obvious [from the Turkish resistance on the 18th] then that the Turk was not going to give up easily; he was going to fight the whole way."[47] He had been surprised by the extent of harassing fire of the mobile batteries;[48] during the operation on 18 March the intensity of Turkish fire led de Robeck to doubt the accuracy of the British intelligence on the shortage of ammunition in the forts.[49] The quality of the defense influenced his decision to conduct a ground campaign to take and occupy the Gallipoli Peninsula. In a telegram to the Admiralty explaining his decision he cited the ability to destroy only a "small percentage" of the fixed and mobile guns, and also the mine menace's "being much greater than was anticipated."[50] The German and Turkish defense of the Dardanelles clearly demonstrated the ability of a determined adversary to disrupt a littoral operation by adopting an appropriate doctrine to maximize the effectiveness of available resources.

Fifth, the results of these mine warfare operations had a strategic (in this case adverse) effect. The failure of the Royal Navy to force the Dardanelles committed the British army to a land campaign on the Gallipoli Peninsula. The army in its turn failed to capitalize on opportunities in two amphibious operations, and the campaign settled into a protracted stalemate.[51] By the time

the British, Australian, and New Zealand forces withdrew in January 1916 they had suffered more than two hundred thousand casualties. The Turkish defenders endured more than 250,000 casualties, but they had prevailed: their commander, Mustafa Kemal, was acclaimed as "the Savior of Gallipoli" and in 1922 became the first president of the Turkish Republic.[52] Further, the success of the Turkish and German defense of the Gallipoli Peninsula persuaded Bulgaria to join the Central Powers. In 1916 a German and Bulgarian army defeated Romania, after which the Central Powers controlled all of the Balkan states.[53]

As for Germany, Admiral Alfred von Tirpitz, Secretary of State of the Ministry of Marine, warned on 8 August 1915 that "should the Dardanelles fall the world war has been decided against us."[54] General Erich von Ludendorff later assessed in his memoirs that "if the enemy fleets, by occupying the Strait, had commanded the Black Sea, Russia could have been supplied with the war material of which she stood in need. The fighting in the East would have assumed a much more serious character. These details clearly show the importance of the Strait, and therefore of Turkey, for the Eastern Front and for our whole position."[55]

In some small part because the tsarist and then provisional Russian regimes never received the support that would have flowed to Black Sea ports had the Dardanelles been cleared, the Bolsheviks seized power on 7 November 1917. Russia withdrew from the Entente and arranged a separate peace with Germany. The Bolsheviks and their heirs afflicted the world until 1991.

Finally, the littoral mine threat presented a significant challenge to the exercise of command. On his second day in charge Admiral de Robeck lost six of his seventeen capital ships in less than two hours. Although he reacted resolutely at first and planned to resume the operation promptly, five days later he completely altered his intentions, proposing a joint operation that surrendered the initiative and—as it developed—the possibility of a strategic victory. The War Cabinet, for its part, was willing to accept severe losses (up to twelve capital ships) to achieve the advantage to be won by forcing a passage through the Dardanelles. The losses on 18 March, approximately seven hundred sailors, were insignificant in comparison to those being suffered at the time on the Western Front. Fisher, despite his personal objections, would not intervene. Yet, notwithstanding the strategic implications of the Dardanelles operation, while "no one in London liked the idea of postponing fleet action till Hamilton opened the Strait, . . . no one pressed hard for the only alternative—a coordinated army-navy assault."[56]

The issue of courage arises. Joint Publication 1 discusses the importance of both physical and moral courage in military operations, defining the latter as both the capacity to take risks and the tenacity to "make bold decisions in the face of uncertainty[,] . . . holding to the chosen course despite challenges or

difficulties."[57] Admiral de Robeck had certainly displayed physical courage during the early phases of the operation;[58] after 18 March, however, he appears to have suffered a crisis of the moral variety. De Robeck chose to abandon the naval operation to force the Dardanelles in spite of the severe Turkish shortage of ammunition and "the need to demonstrate to Greece, Bulgaria, and Romania the military strength and staying power of the Allies."[59] Reflection on the appalling losses his ships had suffered to mines evidently skewed his command judgment.

The failure of the Royal Navy mine countermeasures forces in the Dardanelles prevented Great Britain from achieving important operational and strategic goals, with far-reaching historical consequences. Adopting the Royal Navy Dardanelles campaign for educational purposes as a historical analogy for littoral mine warfare, and discussing the issues it suggests, could help alter the U.S. Navy's perception of the significance of littoral mine warfare. Changing this perception would further the process of making mine warfare "an integral part of our strategy and our forces."[60] Absent such compelling evidence of the value and necessity of a capability for sustained mine warfare, the United States Navy may effectively grant future enemies the power, at vital places and times, to deny the United States maritime dominance. The implications of sea denial achieved by defensive mining of critical littoral areas can reverberate far beyond the joint task force commander and regional senior commanders. As the mined waters of the Dardanelles showed, strategic plans, national objectives, and even grand historical trends may be altered.

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18. Melia, p. 3.

19. Potter, p. 321.

20. Joint Publication 1, p. 16. The Inchon landing itself does nothing to argue for the importance of littoral mine warfare. The operation was undertaken with no mine intelligence, other than numerous sightings of mines in the area by United States, Royal Navy, and South Korean ships. There were no mine countermeasures assets in theater, though Soviet advisors and mines made available from Soviet stockpiles in July had reached Inchon by rail prior to the amphibious landings. Contact mines encountered by support ships approaching Inchon on 10 September were effectively neutralized with gunfire. However, the scope of the minefields was not fully known until aerial mine spotting was conducted by patrol aircraft on 2 October, more than two weeks after the landing. In addition, also after the landing, ten unassembled influence mines were found on the largest island on the sixty-mile-long channel that is the only deep-water approach to Inchon harbor (Malcolm Cagle [Cdr., USN] and Frank Manson [Cdr., USN], *The Sea War in Korea* [Annapolis, Md.: Naval Institute Press, 1957], pp. 91, 133, 145, 378). Inchon is more properly cited, by the Joint Chiefs of Staff, the U.S. Navy, and the Marine Corps, as a historical analogy for joint leadership and maneuver warfare (Joint Publication 1, p. 16; Naval Doctrine Publication 1, p. 34; and Krulak, p. 71).

21. J. A. Field, Jr., *History of United States Naval Operations, Korea* (Washington, D.C.: Superintendent of Documents, 1962), p. 220.

22. Melia, p. 77.

23. Joint Task Force 7 was composed of 144 vessels, including the ships of Transport Squadron One. Lynn Montross and Nicholas A. Canzona [Capt., USMC], *U.S. Marine Operations in Korea 1950–1953*, vol. 3, *The Chosin Reservoir Campaign* (Washington, D.C.: Headquarters U.S. Marine Corps, 1957), pp. 25, 373–6.

24. Ibid., p. 79.

25. Examples include:

> The main lesson of the Wonsan operation is that no so-called subsidiary branch of the naval service, such as mine warfare, should ever be neglected or relegated to a minor role in the future. Wonsan also taught us that we can be denied freedom of movement to an enemy objective through the intelligent use of mines by an alert foe.
>
> Admiral Turner Joy, 1951

> When you can't go where you want to, when you want to, you haven't got command of the sea. And command of the sea is a rock-bottom foundation of all our war plans. We've been plenty submarine-conscious and air-conscious. Now we're going to start getting mine-conscious—last week.
>
> Admiral Forrest Sherman, 1951

> We have lost control of the seas to a nation without a Navy, using pre–World War I weapons, laid by vessels that were utilized at the time of the birth of Christ.
>
> Admiral Allan Smith, 1950

> Minesweeping seems to acquire sex appeal once every 25 years. The intervening hiatus is quite a hurdle to overcome.
>
> Admiral Isaac Kidd, 1973

> No element of our Navy is as deficient in capability against the threat as is the mine countermeasures force.
>
> Admiral Joseph Metcalf, 1985

> Until recently, the United States has not given sustained attention to maintaining a superior capability in mine warfare, particularly mine countermeasures. . . . I intend to keep attention focused on our

vulnerability and continue to press for resources to put us in a position where we can adequately protect our interests and deter potential adversaries.

Admiral Carlisle A. H. Trost, 1989.

26. Paul G. Halpern, *The Naval War in the Mediterranean, 1914–1918* (Annapolis, Md.: Naval Institute Press, 1987), pp. 50–1.

27. G. A. Schreiner, "Allied Naval Operations during the Dardanelles-Gallipoli Campaign 1914–1915," unpublished typescript, National Archives, Record Group 45, p. 16.

28. C. F. Aspinall-Oglander, *Gallipoli*, vol. 1 (London: William Heinemann, 1929), p. 34.

29. Sir Julian Corbett, *Naval Operations*, vol. 2 (London: Longmans, Green, 1921), p. 107.

30. J. D. Wallin, *By Ships Alone: Churchill and the Dardanelles* (Durham, N.C.: Carolina Academic Press, 1981), p. 127.

31. Aspinall-Oglander, p. 55.

32. Taprell Dorling, *Swept Channels* (London: Hodder and Stoughton, 1935), p. 156.

33. Ibid., p. 162.

34. Aspinall-Oglander, p. 97; and Alan Moorehead, *Gallipoli* (New York: Harper & Brothers, 1956).

35. On 13 March Churchill informed Admiral Carden that "we have information [in fact, radio intercepts] that the Turkish forts are short of ammunition" (Wallin, p. 155).

36. Wallin, p. 167.

37. Ibid., p. 74.

38. A. J. Marder, *The War Years: To the Eve of Jutland*, vol. 2 of *From the Dreadnought to Scapa Flow: The Royal Navy in the Fisher Era, 1904–1919* (London: Oxford Univ. Press, 1965), pp. 221–2.

39. Aspinall-Oglander, p. 36.

40. Sir Roger Keyes, *The Fight for Gallipoli* (London: Eyre and Spottiswoode, 1941), p. 71.

41. U.S. Naval War College, "Elements of Operational Warfare," unpublished course reading, NWC 4096 (Newport, R.I.: August 1996), pp. 3–4.

42. Aspinall-Oglander, p. 34.

43. Corbett, p. 162.

44. Schreiner, p. 24.

45. Ibid., pp. 24–5.

46. Schreiner, p. 28.

47. A. J. Marder, *From the Dardanelles to Oran: Studies of the Royal Navy in War and Peace, 1915–1940* (London: Oxford Univ. Press, 1974), p. 20.

48. Marder, *From the Dreadnought to Scapa Flow*, p. 205.

49. Marder, *From the Dardanelles to Oran*, p. 21.

50. Keyes, p. 82.

51. Eliot Cohen and John Gooch, *Military Misfortunes: The Anatomy of Failure in War* (New York: Vintage Books, 1991), pp. 133–65.

52. Alan Moorehead, *Gallipoli* (New York: Ballentine Books, 1991), p. 334.

53. Potter, p. 429.

54. Aspinall-Oglander, p. vii.

55. Ibid.

56. Potter, p. 420.

57. Joint Publication 1, p. 9.

58. Keyes, p. 83.

59. Wallin, p. 192.

60. Boorda.

Ψ

From Our Autumn 1987 Issue . . .

The Self-Designing High-Reliability Organization

Aircraft Carrier Flight Operations at Sea

Gene I. Rochlin, Todd R. La Porte, and Karlene H. Roberts

A hundred things I have no control over could go wrong and wreck my career . . . but wherever I go from here, I'll never have a better job than this. . . . This is the best job in the world.

Carrier commanding officer

RECENT STUDIES OF LARGE, FORMAL ORGANIZATIONS that perform complex, inherently hazardous, and highly technical tasks under conditions of tight coupling and severe time pressure have generally concluded that most will fail spectacularly at some point, with attendant human and social costs of great severity.[1] The notion that accidents in these systems are "normal," that is, to be expected given the conditions and risks of operation, appears to

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Judging by requests received at the *Review* editorial offices, this is one of the most frequently reproduced and consulted articles ever published by the journal. (It was too recent, however, to meet the criteria established for inclusion in the Winter 1998 fiftieth-anniversary issue.)

At the time of publication, Professor Rochlin was adjunct professor of energy and resources and a research political scientist at the Institute of Governmental Studies, University of California, Berkeley. Professor La Porte was professor of political science and associate director of the Institute of Governmental Studies, University of California, Berkeley. Professor Roberts, an organizational psychologist, was professor of business administration at the University of California, Berkeley.

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be as well grounded in experience as in theory.[2] Yet there is a small group of organizations in American society that appears to succeed under trying circumstances, performing daily a number of highly complex technical tasks in which they cannot afford to "fail." We are currently studying three unusually salient examples whereby devotion to a zero rate of error is almost matched by performance—utility grid management (Pacific Gas & Electric Company), air traffic control, and flight operations aboard U.S. Navy aircraft carriers.

Of all activities studied by our research group, flight operations at sea is the closest to the "edge of the envelope"—operating under the most extreme conditions in the least stable environment, and with the greatest tension between preserving safety and reliability and attaining maximum operational efficiency.[3] Both electrical utilities and air traffic control emphasize the importance of long training, careful selection, task and team stability, and cumulative experience. Yet the Navy demonstrably performs very well with a young and largely inexperienced crew, with a "management" staff of officers that turns over half its complement each year, and in a working environment that must rebuild itself from scratch approximately every eighteen months. Such performance strongly challenges our theoretical understanding of the Navy as an organization, its training and operational processes, and the problem of high-reliability organizations generally.

It will come as no surprise to this audience that the Navy has certain traditional ways of doing things that transcend specifics of missions, ships, and technology. Much of what we have to report interprets that which is "known" to naval carrier personnel, yet is seldom articulated or analyzed.[4] We have been struck by the degree to which a set of highly unusual formal and informal rules and relationships are taken for granted, implicitly and almost unconsciously incorporated into the organizational structure of the operational Navy.

Only those who have been privileged to participate in high-tempo flight operations aboard a modern aircraft carrier at sea can appreciate the complexity, strain, and inherent hazards that underlie seemingly routine day-to-day operations. That naval personnel ultimately accept these conditions as more or less routine is yet another example of how adaptable people are to even the most difficult and stressful of circumstances.

We have now spent considerable time aboard several aircraft carriers in port and at sea, though our team of non-Navy academics retains a certain distance that allows us to recognize and report on the astonishing and unique organizational structure and performance of carrier flight operations.[5] We do not presume that our limited exposure to a few aspects of operations has given us a comprehensive overview. Nevertheless, we have already been able to identify

a set of causal factors that we believe are of central importance to understanding how such organizations operate.

In an era of constant budgetary pressure, the Navy shares with other organizations the need to defend those factors most critical to maintaining performance without, at the same time, sacrificing either operational reliability or safety. Following many conversations with naval personnel of all ranks, we are convinced that the rules and procedures that make up those factors are reasonably well known internally, but are written down only in part and generally not expressed in a form that can be readily conveyed outside the confines of the Navy.

The purpose of this article is to report some of our more relevant findings and observations to our gracious host, the Navy community; to describe air operations through the eyes of informed, yet detached observers; and to use our preliminary findings to reflect upon why carriers work as well as they do.

Self-Design and Self-Replication

> So you want to understand an aircraft carrier? Well, just imagine that it's a busy day, and you shrink San Francisco Airport to only one short runway and one ramp and gate. Make planes take off and land at the same time, at half the present time interval, rock the runway from side to side, and require that everyone who leaves in the morning returns that same day. Make sure the equipment is so close to the edge of the envelope that it's fragile. Then turn off the radar to avoid detection, impose strict controls on radios, fuel the aircraft in place with their engines running, put an enemy in the air, and scatter live bombs and rockets around. Now wet the whole thing down with salt water and oil, and man it with 20-year-olds, half of whom have never seen an airplane close-up. Oh, and by the way, try not to kill anyone.
>
> Senior officer, Air Division

Today's aircraft carrier flight operations are as much a product of their history and continuity of operation as of their design. The complexity of operations aboard a large, modern carrier flying the latest aircraft is so great that *no one,* on or off the ship, can know the content and sequence of every task needed to make sure the aircraft fly safely, reliably, and on schedule. As with many organizations of similar size and complexity, tasks are broken down internally into smaller and more homogeneous units as well as task-oriented work groups.[6] In the case of the Navy, the decomposition rules are often ad hoc and circumstantial: some tasks are organized by technical function (navigation, weapons), some by unit (squadron), some by activity (handler, tower), and some by mission (combat, strike). Men may belong to and be evaluated by one unit

(e.g., one of the squadrons), yet be assigned to another (e.g., aircraft maintenance).

In order to keep this network alive and coordinated, it must be kept connected and integrated horizontally (e.g., across squadrons), vertically (from maintenance and fuel up through operations), and across command structures (battle group–ship–air wing). As in all large organizations, the responsible officer or chief petty officer has to know what to do in each case, how to get it done, whom to report to and why, and how to coordinate with all units that he depends upon or that depend upon him. This is complicated in the Navy case by the requirement for many personnel, particularly the more senior officers, to interact on a regular basis with those from several separate organizational hierarchies. Each has several different roles to play depending upon which of the structures is in effect at any given time.[7]

Furthermore, these organizational structures also shift in time to adapt to varying circumstances. The evolution of the separate units (e.g., ship, air wing, command structures) and their integration during workup into a fully coordinated operational team, for example, have few, if any, applicable counterparts in civilian organizations.[8] There is also no civilian counterpart for the requirement to adapt to rapid shifts in role and authority in response to changing tactical circumstances during deployment.

No armchair designer, even one with extensive carrier service, could sit down and lay out all the relationships and interdependencies, let alone the criticality and time sequence of all the individual tasks. Both tasks and coordination have evolved through the incremental accumulation of experience to the point where there probably is no single person in the Navy who is familiar with them all.[9] Rather than going back to the *Langley,** consider, for the moment, the year 1946, when the fleet retained the best and newest of its remaining carriers and had machines and crews finely tuned for the use of propeller-driven, gasoline-fueled, Mach 0.5 aircraft on a straight deck.

Over the next few years the straight flight deck was to be replaced with the angled deck, requiring a complete relearning of the procedures for launch and recovery and for "spotting" aircraft on and below the deck. The introduction of jet aircraft required another set of new procedures for launch, recovery, and spotting, and for maintenance, safety, handling, engine storage and support, aircraft servicing, and fueling. The introduction of the Fresnel-lens landing system and air traffic control radar put the approach and landing under centralized, positive, on-board control. As the years went by, the launch/approach speed, weight, capability, and complexity of the aircraft

* The first U.S. Navy aircraft carrier, commissioned as CV 1 (after conversion from a collier) in 1922. *Langley* was sunk by the Japanese in 1942.

increased steadily, as did the capability and complexity of electronics of all kinds. There were no books on the integration of this new "hardware" into existing routines and no other place to practice it but at sea; it was all learned on the job. Moreover, little of the process was written down, so that the ship in operation is the only reliable "manual."

For a variety of reasons, no two aircraft carriers, even of the same class, are quite alike. Even if nominally the same, as are the recent *Nimitz*-class ships, each differs slightly in equipment and develops a unique personality during its shakedown cruise and first workup and deployment.[10] While it is true that each ship is made up of the same range of more or less standardized tasks at the micro level, the question of how to do the job right involves an understanding of the structure in which the job is embedded, and that is neither standardized across ships nor, in fact, written down systematically and formally anywhere. If they left the yards physically different, even such apparently simple matters as spotting aircraft properly on the deck have to be learned through a process of trial and error.[11]

What is more, even the same formal assignment will vary according to time and place. Carriers differ; missions differ; requirements differ from Atlantic to Pacific, and from fleet to fleet; ships have different histories and traditions, and different equipment; and commanding officers and admirals retain the discretion to run their ships and groups in different ways and to emphasize different aspects. Increased standardization of carriers, aircraft loadings, missions, tasks, and organizational structure would be difficult to obtain, and perhaps not even wise.[12] There is a great deal to learn in the Navy, and much of it is only available on the spot.

Shore-based school training for officers and crew provides only basic instruction.[13] It includes a great deal about what needs to be done and the formal rules for doing it. Yet it only provides generalized guidelines and a standardized framework to smooth the transition to the real job of performing the same tasks on board as part of a complex system. NATOPS* and other written guidelines represent the book of historical errors. They provide boundaries to prevent certain actions known to have adverse outcomes, but little guidance as to how to promote optimal ones.

Operations manuals are full of details of specific tasks at the micro level but rarely discuss integration into the whole. There are other written rules and procedures, from training manuals through standard operating procedures (SOPs), that describe and standardize the process of integration. None of them explain how to make the whole system operate smoothly, let alone at the level of performance that we have observed.[14] It is in the real-world environment

* Naval Air Training and Operating Procedures Standardization.

of workups and deployment, through the continual training and retraining of officers and crew, that the information needed for safe and efficient operation is developed, transmitted, and maintained. Without that continuity, and without sufficient operational time at sea, both effectiveness and safety would suffer.

Moreover, the organization is not stable over time. Every forty months or so there is an almost 100 percent turnover of crew, and all of the officers will have rotated through and gone on to other duty. Yet the ship remains functional at a high level. The Navy itself is, of course, the underlying structural determinant. Uniforms, ranks, rules and regulations, codes of conduct, and specialized languages provide a world of extensive codification of objects, events, situations, and appropriate conduct; members who deviate too far from the norm become "foreigners" within their own culture and soon find themselves outside the group, figuratively if not literally.[15]

Behavioral and cultural norms, SOPs, and regulations are necessary, but they are far from sufficient to preserve operational structure and the character of the service. Our research team noted three mechanisms that act to maintain and transmit operational factors in the face of rapid turnover. First, and in some ways most important, is the pool of chief petty officers, many of whom have long service in their specialty and circulate around similar ships in the fleet.[16] Second, many of the officers and some of the crew will have at some time served on other carriers, albeit in other jobs, and bring to the ship some of the shared experience of the entire force. Third, the process of continual rotation and replacement, even while on deployment, maintains a continuity that is broken only during a major refit. These mechanisms are realized by an uninterrupted process of on-board training and retraining that makes the ship one huge, continuing school for its officers and men.

When operational continuity is broken or nonexistent, the effects are observable and dramatic. One member of our research group had the opportunity to observe a new *Nimitz*-class aircraft carrier as she emerged from the yard and remarked at how many things had to be learned before she could even begin to commence serious air operations.[17] Even for an older and more experienced ship coming out of an ordinary refit, the workup towards deployment is a long and arduous process. Many weeks are spent just qualifying the deck for taking and handling individual aircraft, and many more at gradually increasing densities to perfect aircraft handling as well as the coordination needed for tight launch and recovery sequences. With safety and reliability as fixed boundary conditions, every moment of precious operational time before deployment is devoted to improving capability and efficiency.

The importance of adequate workup time—for flight operations to be conducted safely at present levels of technical and operational complexity and at the tempo required for demonstrating effectiveness—cannot be overemphasized.

During our research we followed one carrier in which the workup was shortened by "only" two weeks, for reasons of economy. As a result, the ship was forced to complete its training during the middle of a difficult and demanding mid-ocean exercise; this placed an *enormous* strain on all hands. While the crew succeeded—the referees adapted compensating evaluation procedures—risks to ship's personnel and equipment were visibly higher. Moreover, officers and crew were openly unhappy with their own performance, with an attendant and continuing impact on morale.[18]

The Paradox of High Turnover

As soon as you learn 90% of your job, it's time to move on. That's the Navy way.

Junior officer

Because of the high turnover rate, a U.S. aircraft carrier will begin its workup with a large percentage of new hands in the crew, and with a high proportion of officers new to the ship. The U.S. Navy's tradition of training generalist officers (which distinguishes it from the other military services) assures that many of them will also be new to their specific jobs. Furthermore, tours of duty are not coordinated with ship sailing schedules; hence, the continual replacement of experienced with "green" personnel, in critical as well as routine jobs, continues even during periods of actual deployment.

Continual rotation creates the potential for confusion and uncertainty, even in relatively standardized military organizations. Lewis Sorley has characterized the effects of constant turnover in other military systems as "turbulence" and has identified it as the prime source of loss of unit cohesion.[19] A student of Army institutional practices has remarked that the constant introduction of new soldiers into a unit just reaching the level of competence needed to perform in an integrated manner can result in poor evaluations, restarting the training cycle, and keeping individuals perpetually frustrated by their poor job performance.[20]

Negative effects in the Navy case are similar. It takes time and effort to turn a collection of men, even men with the common training and common background of a tightly knit peacetime military service, into a smoothly functioning operations and management team. SOPs and other formal rules help, but the organizarion must learn to function with minimal dependence upon team stability and personal factors. Even an officer with special aptitude or proficiency at a specific task may never perform it at sea again.[21] Cumulative learning and improvement are also achieved slowly and with difficulty, and individual innovations and gains are often lost to the system before they can be consolidated.[22]

Yet we credit this practice with contributing greatly to the effectiveness of naval organizations. There are two general reasons for this paradox. First, the efforts that must be made to ease the resulting strain on the organization seem to have positive effects that go beyond the problem they directly address. And second, officers must develop authority and command respect from those senior enlisted specialists upon whom they depend and from whom they must learn the specifics of task performance.

The Navy's training cycle is perforce dictated by the schedule of its ships, not of its personnel. Because of high social costs of long sea-duty tours, the Navy has long had to deal with such continual turnover—it attempts as best it can to mitigate the negative effects. Most important is the institutionalization of continual, cyclic training as part of organizational and individual expectations. This is designed to bring new people "up to speed" with the current phase of the operational cycle, thus stabilizing the environment just before and during deployment; however, this is accomplished at the cost of pushing the turbulence down into individual units. Although the deployment cycle clearly distinguishes periods of "training" from those of "operations," it is a measure of competence and emphasis, not of procedural substance, that applies primarily to the ship as a unit, not its men as individuals.

The result is a relatively open system that exploits the process of training and retraining as a means for socialization and acculturation. At any given moment, all but the most junior of the officers and crew are acting as teacher as well as trainee. A typical lieutenant commander, for instance, simultaneously tries to master his present job, train his juniors, and learn about the next job he is likely to hold. If he has just come aboard, he is also engaged in trying to master or transfer all the cumulated knowledge about the specifics of task, ship, and personnel in a time rarely exceeding a few weeks.[23] In addition to these informal officer-officer and officer-crew interactions, officers and crew alike are also likely to be engaged in one or more courses of formal study to master new skills in the interest of career advancement or rating.

As a result, the ship appears to us as one gigantic school, not in the sense of rote learning, but in the positive sense of a genuine search for acquisition and improvement of skills. One of the great enemies of high reliability is the usual "civilian" combination of stability, routinization, and lack of challenge and variety that predispose an organization to relax vigilance and sink into a dangerous complacency that can lead to carelessness and error.[24] The shipboard environment on a carrier is never that stable. Traditional ways of doing things are both accepted and constantly challenged. Young officers rotate in with new ideas and approaches; old chiefs remain aboard to argue for tradition and experience. The resulting dynamic can be the source of some confusion and

uncertainty at times, but at its best leads to a constant scrutiny and rescrutiny of every detail, even for SOPs.

In general, the Navy has managed to change the rapid personnel turnover to an advantage through a number of mechanisms that have evolved by trial and error. SOPs and procedures, for example, are often unusually robust, which in turn contributes another increment to reliability. The continual movement of people rapidly diffuses organizational and technical innovation as well as "lessons learned," often in the form of "sea stories," throughout the organization. Technical innovation is eagerly sought where it will clearly increase both reliability and effectiveness, yet resisted when suggested purely for its own sake. Data is logged with grease pencils by operators who read sophisticated radar systems; indicators for the cables to arrest multimillion-dollar aircraft are set and checked mechanically, by hand. Things tend to be done in proven ways and changed only when some unit has demonstrated and documented an improvement in the field. The problem for the analyst and for the Navy is the separation of functional conservatism from pure tradition.

Authority Overlays

> Here I'm responsible for the lives of my gang. In civilian life, I'm the kind of guy you wouldn't like to meet on a dark street.
>
> Deck petty officer

Our team noted with some surprise the adaptability and flexibility of what is, after all, a military organization in the day-to-day performance of its tasks. On paper, the ship is formally organized in a steep hierarchy by rank with clear chains of command, and means to enforce authority far beyond those of any civilian organization. We supposed it to be run by the book, with a constant series of formal orders, salutes, and yes-sirs. Often it is, but flight operations are not conducted that way.

Flight operations and planning are usually conducted as if the organization were relatively "flat" and collegial. This contributes greatly to the ability to seek the proper, immediate balance between the drive for safety and reliability and that for combat effectiveness. Events on the flight deck, for example, can happen too quickly to allow for appeals through a chain of command. Even the lowest rating on the deck has not only the authority but the obligation to suspend flight operations immediately, under the proper circumstances, without first clearing it with superiors. Although his judgment may later be reviewed or even criticized, he will not be penalized for being wrong and will often be publicly congratulated if he is right.[25]

Coordinated planning for the next day's air operations requires a series of involved trade-offs between mission requirements and the demands of training, flight time, maintenance, ordnance, and aircraft handling. It is largely done by a process of ongoing and continuing argument and negotiation among personnel from many units, in person and via phone, which tend to be resolved by direct order only when the rare impasse develops that requires an appeal to higher authority. In each negotiation, most officers play a dual role, resisting excessive demands from others that would compromise the safety or future performance of their units, while maximizing demands on others for operational and logistic support.

This does not mean that formal rank and hierarchy are unimportant. In fact, they are the lubricant that makes the informal processes work. Unlike the situation in most civilian organizations, relative ranking in the hierarchy is largely stable and shaped by regular expectations, formal rules, and procedures. Although fitness reports and promotion review boards are not free of abuses or paradoxes, the shipboard situation tends to promote cooperative behavior, which tends to minimize the negative effects of jealousy and direct competition.[26] Although officers of the same rank are competitively rated, each stands to benefit if joint output is maximized and to suffer if the unit is not performing well. Thus, we rarely observe such strategies as the hoarding of information or deliberate undermining of the ability of others to perform their jobs that characterize so many civilian organizations, particularly in the public sector.

Redundancy

> How does it work? On paper, it can't, and it don't. So you try it. After a while, you figure out how to do it right and keep doing it that way. Then we just get out there and train the guys to make it work. The ones that get it we make POs.* The rest just slog through their time.
>
> Flight deck CPO

Operational redundancy—the ability to provide for the execution of a task if the primary unit fails or falters—is necessary for high-reliability organizations to manage activities that are sufficiently dangerous to cause serious consequences in the event of operational failures.[27] In classic organizational theory, redundancy is provided by some combination of duplication (two units performing the same function) and overlap (two units with functional areas in

* Petty officers, the middle ranks of U.S. Navy enlisted personnel, specializing in a "rate" (such as Aviation Boatswain's Mate). "CPOs," or chief petty officers, occupy the three highest enlisted pay grades (aside from Master Chief Petty Officer of the Navy).

common). Its enemies are mechanistic management models that seek to eliminate these valuable modes in the name of "efficiency."[28] For a carrier at sea, several kinds of redundancy are necessary, even for normal peacetime operations, each of which creates its own kinds of stress.

A primary form is technical redundancy involving operations-critical units or components on board—computers, radar antennas, etc. In any fighting ship, as much redundancy is built in as is practicable. This kind of redundancy is traditional and well understood. Another form is supply redundancy. The ship must carry as many aircraft and spares as possible to keep its power projection and defensive capability at an effective level in the face of maintenance requirements and possible operational or combat losses. Were deck and parts loading reduced, many of the dangers and tensions involved in scheduling and moving aircraft would be considerably lessened. Here is a clear case of a trade-off between operational and safety reliability that must be made much closer to the edge of the envelope than would be the case for other kinds of organizations. Indeed, for a combat organization, the trade-off point is generally taken as a measure of overall competence.[29]

Most interesting to our research is a third form, decision/management redundancy, which encompasses a number of organizational strategies to ensure that critical decisions are timely and correct. This has two primary aspects: (a) internal cross-checks on decisions, even at the micro level; and, (b) fail-safe redundancy in case one management unit should fail or be put out of operation. It is in this area that the rather unique Navy way of doing things is the most interesting, theoretically as well as practically.

As an example of (a), almost everyone involved in bringing the aircraft [in for a landing] on board is part of a constant loop of conversation and verification taking place over several different channels at once. At first, little of this chatter seems coherent, let alone substantive, to the outside observer. With experience, one discovers that seasoned personnel do not "listen" so much as monitor for deviations, reacting almost instantaneously to anything that does not fit their expectations of the correct routine. This constant flow of information about each safety-critical activity, monitored by many different listeners on several different communications nets, is designed specifically to assure that any critical element that is out of place will be discovered or noticed by *someone* before it causes problems.

Setting the arresting gear, for example, requires that each incoming aircraft be identified (as to speed and weight), and each of four independent arresting-gear engines be set correctly.[30] At any given time, as many as a dozen people in different parts of the ship may be monitoring the net, and the settings are repeated in two different places (Pri-Fly [Primary Flight Control] and LSO [Landing Signal Officer]).* During our trip aboard *Enterprise* (CVN 65) in April

* Located in the island structure, and on the flight deck, respectively.

1987, she took her 250,000th arrested landing, representing about a million individual settings.[31] Because of the built-in redundancies and the personnel's cross-familiarity with each other's jobs, there had not been a *single* recorded instance of a reportable error in setting that resulted in the loss of an aircraft.[32]

Fail-safe redundancy, (b), is achieved in a number of ways. Duplication and overlap, the most familiar modes of error detection, are used to some extent—for example, in checking mission weapons loading. Nevertheless, there are limits to how they can be provided. Space and billets are tight at sea, even on a nuclear-powered carrier, and unlike land-based organizations, the seagoing Navy cannot simply add extra departments and ratings. Shipboard constraints and demands require a considerable amount of redundancy at relatively small cost in personnel. In addition to the classic "enlightened waste" approach of tolerance for considerable duplication and overlap, other, more efficient strategies that use existing units with other primary tasks as backups are required, such as "stressing the survivor" and mobilizing organizational "reserves."[33]

Stressing-the-survivor strategies require that each of the units normally operate below capacity so that if one fails or is unavailable, its tasks can be shifted to others without severely overloading them. Redundancy on the bridge is a good example.[34] Mobilizing reserves entails the creation of a "shadow" unit able to pick up the task if necessary. It is relatively efficient in terms of both space and personnel but places higher demands on the training and capability of individuals. What the Navy effects, through the combination of generalist officers, high job mobility, constant negotiation, and perpetual training, is a mix that leans heavily on reserve mobilization with some elements of survivor stressing. Most of the officers and a fair proportion of senior enlisted men are familiar with several tasks other than the ones they normally perform and could execute them in an emergency.

The Combat Direction Center (CDC, or just "Combat"), for example, is the center for fighting the ship.[35] Crucial decisions are thereby placed nominally in the hands of relatively junior officers in a single, comparatively vulnerable location. In this case we have noted several of the mechanisms described above. There is a considerable amount of senior oversight, even in calm periods. A number of people are "just watching," keeping track of each other's jobs or monitoring the situation from other locations. There is no one place on the ship that duplicates the organizational function of Combat, yet each of the tasks has a backup somewhere—on the carrier or distributed among other elements of the battle group.[36]

In an "ordinary" organization these parameters would likely be characterized in negative terms. Backup systems differ in pattern and structure from primary ones. Those with task responsibility are constantly under the critical eyes of others. Authority and responsibilities are distributed in different patterns and

may shift in contingencies. In naval circumstances, where reliability is paramount, these are seen as positive and cooperative, for it is the task that is of primary importance.

Thus, those elements of Navy "culture" that have the greatest potential for creating confusion and uncertainty turn out to be major contributors to organizational reliability and robustness under stress. We believe this to be an example of adaptive organizational evolution to circumstance, for it responds very well to the functional necessities of modern operations. In the days of great, compact flotillas, loss of navigational or deck or gun capability by one ship could be compensated for by shifting or sharing with another. There is only one carrier in a battle group and only a handful of other ships spread over many hundreds of square miles. Each, and most particularly the carrier, must internalize its own processes and modalities for redundancy.

Some Preliminary Conclusions

> The job of this ship is to shoot the airplanes off the pointy end and catch them back on the blunt end. The rest is detail.
>
> Carrier commanding officer

Even though our research is far from complete, particularly with regard to comparisons with other organizations, several interesting observations and lessons have already been recorded.

First, the remarkable degree of personal and organizational flexibility we have observed is essential for performing operational tasks that continue to increase in complexity as technology advances. "Ordinary" organizational theory would characterize aircraft carrier operations as confusing and inefficient, especially for an organization with a strong and steep formal management hierarchy (i.e., any "quasi-military" organization). However, the resulting redundancy and flexibility are, in fact, remarkably efficient in terms of making the best use of space-limited personnel.

Second, an effective fighting carrier is not a passive weapon that can be kept on a shelf until it is needed. She is a living unit possessed of dynamic processes of self-replication and self-reconstruction that can only be nurtured by retaining experienced personnel, particularly among the chiefs, and by giving her sufficient operational time at sea. This implies a certain minimum budgetary cost for maintaining a first-line carrier force at the levels of operational capability and safety demanded of the U.S. Navy.

The potential risk of attempting to operate at present levels under increasing budgetary constraints arises because the Navy is a "can-do" organization, visibly

reluctant to say "we're not ready" until the situation is far into the red zone.[37] In time of war, the trade-off point between safety and effectiveness moves, and certain risks must be taken to get units deployed where and when they are needed. In peacetime, the potential costs of deploying units that are less than fully trained are not so easily tolerated. If reductions in at-sea and flying time are to be taken out of workups to preserve operational time on deployment, training and evaluation procedures will have to be adapted to reduce stress—perhaps by overlapping final readiness evaluations into the beginning of the deployment period.

Third, as long-term students of organizations, we are astounded at how little of the existing literature is applicable to the study of ships at sea. Consider, for example, the way in which the several units that make up a battle group (carrier, air wing, supply ships, escorts) are in a continual process of formation and reformation. Imagine any other organization performing effectively when it is periodically separated from and then rejoins the unit that performs its central technical function.[38] More importantly, most of the existing literature was developed for failure-tolerant, civilian organizations with definite and measurable outputs. The complementary body on public organizations assumes not only a tolerance for failure, but at best an ambiguous definition of what measures failure (or for that matter, success).

Fourth, we have been encouraged to reflect on the new large Soviet nuclear carrier now being fitted out in the Black Sea.[39] The Soviet Navy is completely without experience or tradition in large carrier operations. Their internal structure is more rigid and more formal than ours and with far less on-the-job training, especially for enlisted personnel.[40] It will be very interesting to watch their workup time, deck loading, and casualty rates. Of course, it is not clear that they will be trying to emulate U.S. carrier operations rather than the somewhat different style and objectives of the British or French.[41] In either case, we estimate a minimum of several workups (each taking perhaps two or three years) before they begin to approach the deck loads and sortie rates of comparable Western carriers and, unless they are remarkably lucky, there will be some loss of lives in the learning process.[42]

Notes

1. See, for example, Charles Perrow, *Normal Accidents* (New York: Basic Books, 1984).

2. Examples that have attracted recent attention include Bhopal, Séveso, Three-Mile Island, and Chernobyl. All four meet Perrow's criteria for coupling, response time, and complexity. The essence of a "normal" accident is that the potentiality inheres in the design of the system and, despite attempts to fix "blame," is not primarily the result of individual misbehavior, malfeasance, or negligence.

3. By comparison, *civil* air traffic controllers deliberately stay far away from the edge. Fixed rules such as maintaining five-mile intervals are designed to err broadly in the direction of safety. Moreover, the turnover rate for controllers is relatively low (barring extraordinary events such as the recent [1981] strike); even equipment changes are few and far between.

4. From this point we refer to carrier personnel as "men," since as yet the Navy does not allow women to serve aboard combat vessels.

5. We have followed both the USS *Carl Vinson* (CVN 70) and the USS *Enterprise* (CVN 65), under a total of four different captains, through their training and workup from Alameda and San Diego, California, and across the Pacific into the South China Sea. In addition, one of us (Roberts) has been able to observe the initial sea trials of the USS *Theodore Roosevelt* (CVN 71).

6. In formal organizational terms, we refer to this as "decomposability." The basic notion was introduced by Herbert A. Simon in "The Architecture of Complexity," *Proceedings of the American Philosophical Society*, December 1962, pp. 467–82, reprinted in Herbert A. Simon, *The Sciences of the Artificial* (Cambridge, Mass.: The MIT Press, 1981).

7. During our interviews, one senior officer on a flag staff suggested that the several different functional and hierarchical modes of organization might be viewed as a set of "overlays" that are superimposed upon the formal organization at different times, depending upon the task or circumstance at hand. Many of the officers must shift roles numerous times during the course of a single active day of flight operations.

8. The few examples that come to mind are large construction projects, e.g., nuclear power plants, the Alaskan pipeline, etc. However, these usually have considerable oversight from a separate firm whose sole task is to coordinate and schedule the work properly.

9. This point was brought home sharply by the effort to bring up the ZOG computer system on the USS *Carl Vinson*, which would have required that almost complete knowledge about all details of ship operations be known and entered if the system were to function as originally intended. In retrospect, this can be seen as a near-impossible requirement without the mounting of a considerable special effort to collect and organize the data.

10. Furthermore, a strong captain is capable of altering both the character of a ship and the way it operates, if he so chooses.

11. Given the size of modern jet aircraft and the number carried at full load, the matter of spotting is far from trivial. Inefficient spotting can greatly reduce the ability to move aircraft about quickly. Incorrect spotting can lead to serious interference with operations, or even to a "locked" deck, on which it becomes impossible to move aircraft at all. In a trial using the deck model in Flight Deck Control, one of us managed to lock the deck so thoroughly that an aircraft would have had to be pushed over the side to free the deck.

12. Some nonfunctional variations are being reduced. For example, all LSO platforms will soon be located at the same level and position relative to the arresting gear wires. However, it is nearly impossible to upgrade all of the ships at once when new equipment is introduced; therefore, each is at a different stage of modification and upgrade at any given point in time.

13. To some extent this situation is improving. Landing Signal Officers (LSOs), for example, now work with simulators. Although this is no substitute for experience when "eyeball" judgment is concerned, it helps.

14. As one senior chief remarked to us: " You have to know it, but it rarely helps when you really need it."

15. Roger Evered, "The Language of Organizations: The Case of the Navy," in Louis R. Pondy et al., eds., *Organizational Symbolism* (Greenwich, Conn.: JAI Press, 1983), pp. 125–44.

16. A very few stay on one ship for many years, but such "plankowners" are rare in the modern Navy.

17. For example, the first crew was unable to spot the deck effectively; Flight Deck Control had been laid out with the deck model at right angles to the flight deck axis, interfering with spatial visualization and obstructing the Aircraft Handling Officer's direct view of the deck from his only window.

18. The recent grounding of the USS *Enterprise* on Bishop Rock off San Diego may have been at least partially due to her participation in a difficult exercise combining the elements of what were usually two exercises. The effect on ship's morale was very visible. See Karlene H. Roberts, "Bishop Rock Dead Ahead: The Grounding of USS *Enterprise*," submitted to U.S. Naval Institute *Proceedings*. [Editors' note: To the best of our knowledge, this paper did not appear in *Proceedings*.]

19. Lewis Sorley, "Prevailing Criteria: A Critique," in Sam C. Sarkesian, ed., *Combat Effectiveness* (Beverly Hills, Calif.: Sage, 1980), pp. 57–93.

20. L. R. Giguet, "Coordinating Army Personnel Agencies Using Living Systems Theory: An Example," U.S. Army TRADOC, 1979, as quoted by Sorley at pp. 76–7.

21. The term "proficiency" is used in the special sense of Hubert L. Dreyfus and Stuart E. Dreyfus, *Mind over Machine* (New York: Free Press, 1986), who classify five steps of skill acquisition: novice, advanced beginner, competence, proficiency, and expertise. For most officers, mastery of a specific assignment means at most the acquisition of proficiency—the ability to identify situations and act upon them without having to systematically think through the procedural steps involved. The most advanced stage, expertise, involves moving past "problem solving" to "intuition" in decision making. Examples of relevance here include the flying skills of

experienced pilots and the specific expertise of senior chief petty officers—in each case representing many years of continuous practice of a small range of specific skills.

22. We have observed several mechanisms used by the Navy to prevent such loss, including incentives for reporting successful inoovation and formal procedures for their dissemination. The most general mechanism, however, is the informal dissemination of information by the movement of personnel, and through those responsible for refresher and other forms of at-sea training. A most remarkable combination of trainers and active personnel is the recently formed Association of Air Bos'ns, which holds annual meetings where information is exchanged and formal papers are presented.

23. Often, officers near the end of their tours, with new assignments in hand, are also trying to learn as much as they can about their future tasks and responsibilities.

24. K. Weick, "The Role of Interpretation in High Reliability Systems," *California Management Review,* vol. 39, 1987, pp. 112–27.

25. Roberts observes that similar rules would operate to similar advantage on the navigation bridge, which of necessity operates under more formal and traditional rules.

26. Even when fitness report ratings are based solely on merit, they are necessarily subjective to some degree. It is inherently difficult to compare ratings taken on different ships, in different peer groups, by different superiors, even under the best of circumstances. But the general opinion among those we have interviewed is that direct abuses of the system are relatively rare. As with all hierarchical organizations, politics will begin to enter as one moves to higher rank, but it is thought to be a minor factor below the level of captain.

27. We note that the kinds of redundancy required to assure continued effectiveness in combat—e.g., in situations where physical damage to ship or command chains is anticipated—are qualitatively different from redundancy directed primarily to assuring the performance of safety-critical tasks. Elements of the former, however, are often major contributors to the latter.

28. Martin Landau, "Redundancy, Rationality and the Problem of Duplication and Overlap," *Public Administration Review,* November–December 1973, pp. 316–51.

29. In this context, we note that the tempo and character of U.S. carrier operations are so qualitatively different from those of other navies—including the French, British, and prospective Russian—that the envelope itself can only be measured by our own expectations and capabilities.

30. The engines are in different compartments and are band-set by separate operating teams so that collective failures in setting can only occur at the command level, i.e., in the tower, where a number of other independent measures for cross-checking and redundancy are in place.

31. During heavy flight operations there may be anywhere from six hundred to a thousand settings of the engines in a single day. A typical deployment will have eight to ten thousand arrested landings ("traps"), involving thirty to forty thousand settings over a six-to-eight-month period.

32. Although the probabilities are low, the possibility does exist. A minor error may simply result in too much runout, cable damage, or some damage to the aircraft. But an engine set for too heavy a weight can pull a tailhook out, leading to aircraft loss; setting for too low an aircraft weight can result in its "trickling" over the end of the angled deck and into the sea. Experienced air bos'ns and chiefs estimate that perhaps six or seven such serious errors have occurred throughout the entire U.S. fleet over the past twenty years. Our estimate for the rate of uncorrected wrong settings with serious consequences is therefore about one in a million—roughly comparable to the probability of a mid-air collision in a domestic commercial airline flight. Setting errors that are corrected are "nonreportable" incidents and therefore not documented. We also note that on the USS *Carl Vinson,* a much newer ship with a still unbroken memory, no reportable incident of any kind could be recalled in the first seventy thousand traps since its commissioning.

33. Allan W. Lerner, "There Is More Than One Way to Be Redundant," *Administration & Society,* November 1986, pp. 334–59.

34. This was brought home to us during a general quarters drill in which the bridge took simulated casualties.

35. During the period of observation, CDC was also the center for fighting the battle group, a task that will be increasingly supervised by the new Tactical Flag Command Centers (TFCC) as they are installed. Depending upon the physical arrangement of the ship, the CDC area contains the Combat Information Center (CIC), antiair warfare control consoles, and perhaps air operations and carrier air traffic control center (CATCC); other warfare modules, such as those for antisubmarine or antisurface warfare, may also be included or be in physically adjacent spaces.

36. For example, control of fighter aircraft can be done from the carrier, from an E-2 [airborne early warning aircraft], or from one of several other ships in the group.

37. Evered lists qualities of "responsiveness to authority," "being ready," "can do," and "not fazed by sudden contingencies" as among the more "obvious" character traits of naval officer culture. These are

transmitted by training programs, ceremonies, and historical models. The latter is particularly important for the "can do" aspect of the officer culture.

38. Not only are the ship and its air wing parted, but the wing itself is split into component squadrons that train under different functional commands.

39. No definite name for this thousand-foot-plus, angled-deck, sixty to seventy-thousand-ton nuclear-powered carrier has been ascertained at this time. [Editors' note: The year after this article was published, what would have become the Soviet Union's first nuclear-powered carrier, *Ulyanovsk*, was laid down at the Nikolaev yard in the Crimea (but was never completed). Two conventionally powered carriers of a new class with approximately the dimensions mentioned were, however, fitting out in the Black Sea at the time: *Tbilisi*—later *Leonid Brezhnev*, now *Admiral Flota Sovietskogo Soyuza Kuznetsov*—and *Riga* (thereafter *Varyag*).]

40. See Bruce W. Watson and Susan M. Watson, *The Soviet Navy: Strengths and Liabilities* (Boulder, Colo.: Westview, 1986).

41. Although it is currently believed that arresting gear and catapults will be fitted—and the deck mock-up at Saki airfield in the Crimea is so equipped—ski-ramps for a total loading of sixty to seventy short-takeoff-and-landing aircraft appear more likely in the short term, with possible future retrofit of catapults into pre-existing deck slots at some future date. See, for example, Norman Polmar, *Guide to the Soviet Navy*, 4th ed. (Annapolis, Md.: Naval Institute Press, 1986), pp. 164–5.

42. As a group, we doubt they will be able to approach the operating conditions and efficiency of U.S. carriers in this century, if at all, even if they master the associated naval and aircraft technologies.

Ψ

USAFA Eighteenth Military History Symposium

The United States Air Force Academy's Eighteenth Military History Symposium—"Future War: Coalition Operations in Global Strategy"—will be held in Colorado Springs, Colorado, 21–23 October 1998. The purpose of the series is to provide a forum in which recognized scholars may present the results of their research in the field of military affairs; the organizers hope in this way to encourage interest in a vital subject among civilian and military scholars, members of the armed forces, and the cadets of the U.S. Air Force Academy. For more information, visit the Symposium World Wide Web page at <http://www.usafa.af.mil/dfh> or contact Capt. George Stamper at (719) 333-3622, e-mail <18mhs.dfh@usafa.af.mil>.

IN MY VIEW . . .

Host Nation Support

Sir:

The November 1970 *Naval War College Review* contained an article by Colonel J. E. Bex, USAFR, entitled "Japan: An Alien Ally." In it he wrote, "In view of the facade of fairly smooth relations, it has become all too easy for us to assume that the Japanese are much more like us than they really are. . . . What has happened is that our most alien enemy has become our most alien ally." In his summary he wrote, "One can say that it is precisely in the area where things have been going most smoothly that the greatest problems and surprises may be in store for the future American national security policy." These words were written some twenty-five years after termination of hostilities between the United States and Japan.

The Autumn 1997 *Review* issue contains an article by Mr. Paul S. Giarra entitled "Host Nation Support." The author reviews current military/ political relationships after still another twenty-five years have passed. Mr. Giarra, it seems, argues not to withdraw U.S. forces from Japan and Okinawa. He also appears, somewhat obliquely if cogently, to argue *to* withdraw forces.

Given Colonel Bex's observations, Mr. Giarra's essay suggests that the Colonel was indeed prophetic. Notwithstanding arguments not to withdraw, several examples exemplify a contrary position.

- "Bases have become subject to vexing political pressure."
- The vexing political pressure "has had a corrosive, restrictive effect, psychological and practical, on the bilateral relationship."

• "Despite the progress,. . . traditional approaches . . . hold out little prospect for anything more than a temporary patching-over of fundamental problems in Okinawa, *or throughout Japan*" (emphasis added).

• Re Okinawa, "Decades of spectacular growth have both reduced the local economic benefits of the installations in relative terms and placed a higher premium on prime real estate taken up by the U.S. military facilities."

• "Okinawan ideological intent eventually to close U.S. bases has, since September 1995, struck a resonant chord throughout Japan . . . and shaken the very foundation of the security relationship."

. . . and so on.

Perhaps it is time that we withdraw. We have indeed met our goals. I do not buy the notion, given today's technology and capability, that separation by an ocean would destroy our effectiveness or "umbrella."

If the relationship is indeed becoming precarious, as one may infer from the article, a really hard look at major restructuring is in order, politically and militarily. To remain despite these warnings may exacerbate a deteriorating situation. All the work so many have contributed to may be reversed.

Bruno Gruenwald
Lebanon, Pennsylvania

The Pacific War

Sir:

I was rather puzzled by Harry Gailey's review of my book, *The Pacific War* (see *Naval War College Review*, Autumn 1996). At several points, he rebukes me for saying the opposite of what I actually said. Allegedly, I am guilty of a bias toward General Douglas MacArthur that, among other things, causes me to avoid criticizing him for "the lack of preparation of Bataan" in 1941 and the "decision to use the Eighth Army in the southern Philippines" in 1945. In point of fact I describe his prewar plans to defend all the Philippines as "overoptimistic." I condemn him for not promptly reverting to the traditional plan for a retreat to Bataan, commenting that the decision to do so, on December 23, was one "he should have made two weeks earlier" and later remarking that "MacArthur's delay and incredible bungling by the Filipino authorities proved disastrous. . . ." I later said that the decision to clear the southern Philippines was perhaps unwise and, more explicitly, that "Eighth Army would have been better employed helping Krueger's forces on Luzon" (*The Pacific War*, pages 37, 40, 132). While my general evaluation of MacArthur is far more favorable than has been fashionable lately—though it does not differ much from that of D. Clayton

James—it is a more mixed one than Professor Gailey suggests. "MacArthur was an extremely capable and unusually imaginative general, but he was also arrogant, vain, and occasionally reckless. He had a tendency to become so fixated on the development of his own plans that he was prone, as Napoleon put it, to make a picture, and assume that things would develop precisely as he planned and expected" (*The Pacific War*, page 37).

I was even more surprised to learn that General Joseph Stilwell was my "bête noire" and that I ignored the difficult situation he was up against—Chinese and British recalcitrance, and the disaster precipitated by Chiang Kai-shek and General Chennault's ignoring of Stilwell's advice. In fact, I spent several pages describing the fantastic difficulties of the situation in the China-Burma-India theater, and while I am very critical of Stilwell as a tactical commander in North Burma, I made perfectly clear that he was correct in his disputes with Chiang and Chennault, that he and his supporters held a more realistic view of China than other Americans, and that Washington should have supported him (pages 135–146).

Evidently one *agrees* with Professor Gailey at his own peril.

Professor Gailey also accuses me of "gratuitous criticism of other military leaders," especially of those responsible for planning the invasion of Japan, and he says that "Levine simply assumes that naval and air action would have ended the war without an invasion." In fact, I expended considerable space describing the military and political situation of Japan that made an invasion unnecessary and a terrible idea. As for the charge that I gratuitously criticized the U.S. military leaders involved—which leaders? It is well known that many in the Navy and the Army Air Force did not consider an invasion necessary. It is hardly "gratuitous" to note that Nimitz and Arnold proved right and Marshall and MacArthur proved wrong on this particular issue. Professor Gailey suggests that the "proposition" that naval and air action would have ended the war without an invasion "is still open to debate." My reply is, what *else* ended the war? Japan was forced into submission by blockade and bombing. The fact that some of the *final* air action took the form of the first atomic bombs—which were hardly more devastating than the most destructive conventional air attacks in 1945—just does not seem as crucial to me as is usually assumed both by those critical of the use of the bomb and those who assume that the bomb saved the Allies from having to invade Japan.

Alan J. Levine
New York, N.Y.

"Canada and Its Navy"

Wilfred G. D. Lund

Hadley, Michael L., Rob Huebert, and Fred W. Crickard, eds. *A Nation's Navy: In Quest of Canadian Naval Identity.* Montreal: McGill-Queen's Univ. Press, 1996. 460pp. $49.95

Miller, Duncan, and Sharon Hobson. *The Persian Excursion: The Canadian Navy in the Gulf War.* Clementsport, Nova Scotia: The Canadian Peacekeeping Press, 1995. 239pp. $35

THE EDITORS OF *A NATION'S NAVY* regard it as the third volume (after *The RCN in Retrospect* [1982], and *The RCN in Transition* [1988]) of a Canadian naval trilogy. Like the earlier volumes, it is a compilation of essays presented at a conference—in this instance the 1993 Fleet Historical Conference at Halifax. The essays were published in book form to make better known to the Canadian public its navy and its naval heritage. The book's subtitle reflects the conference's theme, to explore the identity of the Canadian navy.

The editors are Michael Hadley, a professor of Germanic studies at the University of Victoria and author of several histories on German submarine warfare and the Canadian navy during the first and second battles of the Atlantic;

Captain(N) Wilfred Lund, OMM, CD (Ret.), is a lecturer in the Department of History at the University of Victoria, where he is also completing his doctorate in personnel policy in the postwar Royal Canadian Navy. He holds a master's degree from Queen's University and diplomas from both the U.S. Naval War College (Naval Command College, 1980) and the National Defence College of Canada. His naval service includes command of the submarine HMCS *Onondaga* (SS 73) and destroyers HMCS *Assiniboine* (DDE 234) and *Nipigon* (DDE 266). Captain Lund has taught at both the Canadian Forces Command and Staff College and the National Defence College, retiring from the latter as Deputy Commandant in 1992.

Captain Lund's "The Royal Canadian Navy's Quest for Autonomy in the North West Atlantic, 1941–43," appeared in a collection of essays published as *The RCN in Retrospect*, as well as in the May–June 1980 issue of the *Naval War College Review*. He is a contributor to *The Northern Mariner* and has been a presenter to the Annual Meeting of the Canadian Historical Association.

Rob Huebert, an assistant professor of political studies at the University of Winnipeg and a commentator on naval affairs; and Fred Crickard, a retired rear admiral. The essayists are academicians, which reflects the maturation of the field of Canadian naval history as a distinct area of scholarly interest.

For contemporary Canadians, particularly "English-Canadians," defining their own identity has become somewhat of a national pastime, second only to hockey. It usually takes the form of an intellectual exercise in comparative analysis of what it means to be Canadian as opposed to American. In short, it is about cultural definition. Happily, Hadley, Huebert, and Crickard have concluded that identity lends itself to "description and celebration" but eludes definition, because in the Canadian context it is a continuing process of refinement, "changing and unclear." Instead, *A Nation's Navy* is an exploration of subjects and issues that constitute the evolving Canadian naval culture, and its main appeal is in its variety of description. The editors do not purport that lessons of history will be found in its pages, instead simply explanations that reflect various socio-political developments within Canadian society. The reader will better understand Canada through this study of its navy.

The essays cover a broad spectrum of interest from 1890 to the present. Organized into five parts, each addresses a specific area of naval interest or endeavour. Part One is an overview entitled "Soundings," which includes essays by three noted Canadian navalists: Marc Milner on historiography, Michael Hadley on the popular image of the navy, and Fred Crickard on strategy. The next three parts explore the navy as an instrument of national policy, as a fighting service, and as a component of Canadian society. The concluding section includes a comparative analysis of the Canadian and Australian experiences, and predictions for the way ahead.

These essays present a wide variety of views. Two examples are Fred Crickard's provocative piece on the "strategic culture" of the naval officer corps, and the authoritative study of the Women's Royal Canadian Naval Service, the "WRENS," by Barbara Winters, challenging some of the patent conclusions of feminist military historians. Winters' essay is one of five sociological studies presented by historians that include a statistically based analysis (by David Zimmerman) of the background of the wartime navy. Richard Gimblett provides useful impressions of modern coalition warfare in his discussion of the Canadian navy's experience and lessons learned (as a "lesser" naval power) during the Gulf war. The concluding piece is an essay by the then Maritime Commander, Vice Admiral Peter Cairns, on the future of the navy.

The overall impression conveyed throughout the book is that the Canadian navy, like Canada itself, has experienced a realignment of its cultural affiliation from the United Kingdom to the United States. This affiliation has political as well as military, social, economic, and technical dimensions. The realignment is

both natural and inevitable, given the geographical proximity of the United States and Canada, the difference in size of populations, societal similarities, and common interests. Yet only Peter Haydon's essay, "The Search for Identity after the War," suggests that the trend of effectiveness in the Canadian navy has become determined by its technical interoperability with the U.S. Navy. James Goldrick's "Australian and Canadian Naval Experience" suggests that in the future a supernational "blue-water navalism" may dominate relationships between such navies as the United States and Canada. The book does not highlight the reality of how closely the Canadian navy is now integrated with the U.S. Navy, which may suggest that the Canadian navy is more confident in its identity than is the Canadian public.

There are gaps in the book that may reflect the current penchant for political correctness. Discussions of the impact of the Charter of Rights and Freedoms and of Canada's tendency to use its navy as a laboratory for social experiments would have been appropriate. Also, negative consequences of imposed bilingualism deserve exploration. Finally, silence prevails over the failure of the government unification policy due in large part to strong resistance by the Canadian navy (that legally does not exist) to surrendering its identity.

A Nation's Navy is an important contribution to the expanding baseline of Canadian naval knowledge, a discipline that now includes serious sociological studies.

The Persian Excursion at first glance appears to be a post–Persian Gulf deployment report of the activities of Canadian maritime forces, written in popular style for public consumption, but it is much more than that. It is a saga of how the Canadian navy and Maritime Air Group (MAG) managed to overcome the challenges of obsolescence and weapons systems limitations to make an important contribution to the coalition effort. At another level, it is an engaging story about individual sailors and aviators (men and women) who rise to the occasion to overcome professional and personal obstacles. One of the authors, Commodore "Dusty" Miller, was the seagoing commander of the Canadian Task Group in the Gulf war, and he also became the "coordinator" of the multinational combat logistics force (CLF) that supported the operational naval units after hostilities commenced. The reader receives the full benefit of his experiences, and of his advice from the perspective of a junior partner on how to succeed in modern coalition naval warfare. The other author is Sharon Hobson, the Canadian correspondent for *Jane's Defence Weekly* and a Research Fellow at the Centre for Foreign Policy Studies at Dalhousie University. She is also the author of several analytical studies on the Canadian navy in the postwar period.

In August 1990 the Canadian fleet consisted mainly of obsolete ships built in the 1950s and 1960s. The arrival of the first modern replacement Canadian

patrol frigate (CPF) was more than a year away. Hobson and Miller show, step by step, what extraordinary preparations were undertaken to convert the antiquated ships (and helicopters) from their primary antisubmarine warfare role, and to install a modicum of self-defence capability against air attack, and what rigorous training was required to prepare for war against an unfamiliar enemy in the hostile climate of the Persian Gulf. The three units included the destroyers HMCS *Athabaskan* and *Terra Nova* and the fleet replenishment vessel (AOR) HMCS *Protecteur*. *Protecteur* made the contingent self-supporting, which was essential if it was to operate as an independent national task group. *Protecteur* also assumed the operational tasking of a destroyer during the embargo phase. The brutal adjustments needed to escape the peacetime exercise mentality and to develop the tactical skills and set up the logistic support needed to survive in a war zone are vividly described. It was in some respects a repeat of the Royal Navy's experience in the Falklands.

There is a strong emphasis in the book on the politics of coalition warfare. All participants in the Gulf were politically motivated, and no less the Canadians. The Canadian navy wished to demonstrate both its worth as an instrument of foreign policy and also the need for balanced, general-purpose forces, including its helicopter air component. To impress Canadian politicians and the public alike, the Canadian naval contingent had to remain intact and perform a prominent role. These political objectives and how they were achieved are discussed in frank detail, including the resolution of conflict between competing operational and political requirements. Commodore Miller's major challenge was trying to balance the political aspirations of the in-theatre Canadian commander against his ability to execute growing operational responsibilities that he had "been volunteered" to assume. The key to the Canadian success was a large, experienced naval staff, a comprehensive communications capability, aggressiveness in seeking responsible tasks, and an air defence umbrella provided by American forces. As Miller implies, no amount of Canadian professionalism or enthusiasm could make up for the lack of an area antiair warfare capability.

Of particular interest are the complete overview and analysis of the complexities of coalition warfare, in which the conventional (in the Nato context) processes of command and control are replaced by "co-ordination and co-operation." Volunteerism dictated the availability of resources. For Commodore Miller, the U.S. Navy–appointed Combat Logistics Force Coordinator (a role for which Canada actively lobbied), this meant that the arrangement of tasks had to comply with the national rules governing the employment of individual ships or groups, and that meant he had to persuade the commanders diplomatically to take the tasks on. Frequently, one is reminded implicitly that the Gulf naval operations were conducted by Nato members and Australia under U.S. Navy strategic direction. The continuing importance of the Nato alliance is

clear. Miller observes that the degree to which commanders were willing to accept operational risks directly reflected the extent of their national commitment to support American political initiatives against Iraq.

The Persian Excursion may well serve as a primer on modern coalition warfare for smaller navies. For the U.S. Navy, it should provide guidance for senior commanders charged with directing an operation in which coalition forces are a component. By implication, it is a sad commentary on the neglect of successive Canadian governments to modernise its navy, which had become the "poor cousin" in Nato. The Canadian navy was simply unprepared technically for the task assigned to it by its political masters.

The book contains a wealth of information, organised into chapters by subject. For example, those interested primarily in communications are directed to Chapter 6, "Reach Out and Touch Someone"; for orchestrating media involvement one is referred to Chapter 11. An indispensable discussion of "lessons learned" forms the concluding chapter. There are good maps and photographs to support the narrative. Throughout, the story is punctuated with personal experiences gleaned from records, diaries, letters home, and interviews. It is as rich in humour as it is honest in discussing mistakes. The latter include an almost continuous flow of distracting VIPs from National Defence Headquarters and the decision to rotate ships' crews when hostilities were imminent. The authors never attempt to inflate the minor role played by the Canadian Task Group; basically, it performed the dogs-body work of interception and escort. But neither do they diminish the Canadians' reputation as the perpetually upbeat "Crazy Canucks," or their dedication to professionalism and getting the job done.

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Errata

In Ivelaw Griffith's "Caribbean Politics and Geonarcotics," in our Spring 1998 issue, the page reference in endnote 24 should be to page 16, not page 3.

Also in that issue, and due to editorial errors: (1) in Dennis Giangreco's essay "To Bomb Or Not to Bomb," a reference on page 143 to the number of Japanese soldiers remaining under arms at the time of surrender is incorrect—there were in fact three million; and (2) the quotation on page 154, right column, from ***Strategic Appraisal 1996*** *in Bradd C. Hayes's book review should read, '"reasonably good relations with the United States.'" We regret these errors.*

SET AND DRIFT

"Musing on Naval Maneuver Warfare"

Timothy E. Somes

"IF MANEUVER WARFARE IS NOTHING MORE THAN FIGHTING intelligently, then its antithesis is 'stupid warfare,'" is a well conceived, attention-grabbing introduction to Wayne Hughes's important *Naval War College Review* article "Naval Maneuver Warfare" (Summer 1997, pp. 25–49). This essay continues Hughes's effort to stimulate serious discussion of the art of naval warfare, an initiative he started with the publication of *Fleet Tactics* a decade ago. His concept of "power warfare" as "the true antithesis of maneuver warfare" demands careful reflection. Whether one completely agrees or not with all of Hughes's concepts and analysis, how much more valuable and rewarding it is to read this article than the superficial, public relations–oriented documents that too often pass for serious thinking on naval warfare these days.

The strengths of Hughes's article, in my view, are several. First it is important simply because it appeared. There is so little these days which constitutes a

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serious discussion of the art form of naval warfare. With the *Naval War College Review* as one of the few outlets for such ideas, it is a significant event to read a piece so rich with ideas and insights. Some of us at the Naval War College think that "naval" warfare is not an obsolete art, but rather merits some facsimile of the intellectual thought it was once given by those whose ghosts haunt these Newport halls. Hughes's ideas will help in this endeavor, stimulating, I hope, other pieces of comparable content and quality.

A more specific strength is his analysis of the concept of *naval* maneuver warfare. I find much to commend in his idea that "*naval* maneuver warfare is associated with delivering goods and services safely," reaffirming that what happens at sea is inexorably linked to the events ashore. Hughes's extensive array of historic examples well illustrates the complex nature of this concept. He reminds us that maneuver warfare is not the same as bloodless warfare, certainly a useful caution in this era when limiting casualties may be one of the first directives a commander receives.

Hughes points out that maneuver warfare frequently includes the element of confounding the enemy's ability to react successfully, in many cases creating what Jan Breemer calls the condition of "permanent surprise." With the recent passing of Colonel John Boyd, I am reminded of how much current military thinking has been influenced by Boyd's "OODA [observe, orient, decide, and act] loop" concept, with its stress on achieving enemy paralysis and collapse by "maneuver[ing one's] adversary beyond his moral-mental-physical capacity to adapt or endure." But Boyd's ideas derived primarily from studies of air and land warfare. Hughes is examining naval warfare. Are there such differences among the domains that extrapolating from one to another is inappropriate? Hughes's article *seems* to suggest that he thinks so. I am not so sure. Clearly this is an important issue for naval officers, one which merits continuing reflection, examination, and debate.

At its most successful, maneuver can create quite remarkable results at all levels of warfare. Hughes refers to one of the classic examples of this, the Inchon invasion. This case clearly illustrates why the contemplation of maneuver so appeals to many operational commanders, and why it is so rewarding when brilliantly executed. Of equal importance in this time of relative peace when conservatism in all things military creeps through the culture, Hughes reminds us with this case that the nature of maneuver warfare requires a significant degree of audacity, where high reward and high risk go hand in glove.

On first blush I find tantalizing Hughes's idea of "power warfare" as the true antithesis of maneuver warfare. The history of the sea is certainly replete with examples illustrating his idea that "power warfare achieves success by exhibiting the capacity to destroy the enemy's forces and their support faster than he can destroy ours." Hughes expends extensive effort to establish the validity of this

idea. Reviewing these competing concepts, as I understand his summary in Table 1, he feels that maneuver warfare equates to attaining "superior posture against the enemy." In contrast, his concept of power warfare revolves around efforts to "destroy the enemy." "Each form of warfare has its own time and place of application. . . . The crux is, can and will the enemy concede our objective?"

Fair enough. Hughes emphasizes that "naval maneuver is an attractive *operational* concept" (his emphasis), suggesting that there is a convergence of agreement on this point by the Naval War College, the Naval Doctrine Command, and the staff of the Chief of Naval Operations. But later in the article he introduces an apparent corollary that "naval *tactics* are power warfare" (my emphasis). *If* correct these linked ideas require both careful examination and a comprehensive effort to understand the ramifications for the Navy in the future. Hughes asserts that "naval battles are won by sinking the enemy or putting him out of action before he can do the same to oneself. . . . Simply put, naval tactics are power warfare aimed at destruction. . . . Naval tactics are invariably attrition-oriented." Is this emphasis on destruction of ships at sea adequate as a guide to the naval commander?

I recollect that in a long-ago discussion Hughes gave me the impression that he was not enamored with the concept of "operational art" or the operational level of war, at least as it applied to the naval commander. This article suggests that he now accepts these concepts, albeit in a lukewarm manner. He appears to suggest that "maritime operational art is almost, but not quite, synonymous with operational logistics." But is there something more to the concept of maritime operational art and the art form of a senior naval commander than the tasks oriented around controlling seaborne logistics flow in a campaign? At the campaign level Hughes suggests "history validates the worth of naval maneuver." This then seems to imply that the astute naval commander needs to focus on more than obtaining a favorable ratio of ships destroyed or put out of action. Is the *maneouvre* of Castex, "*to move intelligently in order to create a favorable situation,*" more applicable to naval success than Hughes seems to imply? Is there perhaps more to naval tactics than pure attrition?

One of the most intriguing, and most studied, battles in twentieth-century naval history is the battle of Jutland. An extraordinarily complex naval engagement, it illustrates the dilemma inherent in attempting to define with labels such actions. The tactical problem could possibly be characterized as straightforward efforts by each side to destroy the enemy's ships, a good example of power warfare. But when closely examined within the complex context of the political, strategic, and operational environment that existed by 1916, the nature of the interplay between the contestants—certainly at the operational level, and arguably at the tactical level as well—could be characterized as maneuvering

by both sides in an effort to adjust the operational and strategic balance. Both sides appreciated that this effort to adjust the relative force ratios would apply significant, perhaps decisive, leverage in what was a tenuous but tenacious balance of power. Far less than massive destruction by one side or the other would have conceivably achieved this goal. This battle is particularly interesting because of the multifaceted role that the submarine played. The restricted submarine warfare by the Germans against shipping had failed to alter the strategic course of the war. Failure to get permission to wage unrestricted antishipping warfare prompted German Admiral Reinhard Scheer to put into motion his bait-and-ambush plan. The German High Seas Fleet was the bait, and the U-boats (and mines) were the specific tactical instruments of leverage lying in an (unsuccessful) ambush; the confused outcome of the subsequent naval battle has provided grist for endless hours of debate by subsequent generations of navalists.

Was Jutland purely power warfare (that is, attrition-based tactics)? Or were both sides searching for an opening that would enable them to use their naval instruments of war to gain (or avoid losing) a relative advantage in which to leverage further a stalemated situation? When we remember that this engagement was but one instance of repeated efforts during this war to use the revolutionary submarine platform to achieve strategic and operational leverage by tactically and selectively targeting the battleship, it is possible to appreciate the challenge of applying the appropriate conceptual label. The submarine's use repeatedly forced each side into actions the effects of which their past experience did not enable them to anticipate adequately. From the early months of the war the British were deeply concerned that they might lose a few battleships to U-boats, losses that would have altered the relative fleet-power ratio. Their fear prompted repeated, and less than desirable, tactical battle fleet moves. As the result of the admittance of the submarine, a revolutionary technology, into the naval equation, this case has long fascinated me with its implications for the future. The leverage gained by the introduction of weapons whose real nature is not well understood should give current naval thinkers pause as we try to anticipate such new concepts as moving from an emphasis on naval platforms to technologies of closely linked, internetted naval systems.

Consider the battle of Midway, certainly a familiar case to us all. There were several moves made by Admiral Chester Nimitz and Admiral Raymond Spruance that convey the special nature of naval operational art as practiced by great naval commanders, suggesting the *maneouvre* that Castex appears to imply. The adroit use of intelligence to ferret out the operational objective of the Japanese is certainly the first. There is the entire saga of U.S. carriers, their movement across the Pacific theater and their last-minute repairs. The final positioning of these few carriers east of Midway seems to epitomize the naval

operational art at its most brilliant. With four Japanese carriers sunk, Admiral Isoroku Yamamoto chose to retire, though he still maintained a vastly superior fleet. Spruance carefully avoided maneuvering his remaining ships into a position where he could have lost the decisive advantage the United States had gained.

I wonder whether either term, "maneuver warfare" or "power warfare," completely captures the nature of what happened at Midway. Perhaps "decisive leverage" better conveys what sinking, or putting out of action, a few key enemy ships (in that case the four Japanese carriers) may achieve. Is there perhaps a parallel between these "high value" ships and the land-oriented "operational centers of gravity"? Certainly the skillful operational commander is looking for the "decisive leverage" that the terms "high value" and "centers of gravity" suggest. Is it possible that the acme of the naval operational art might include naval tactics that focus on something other than just raw enemy attrition? Certainly, if a tactical engagement results in enough of the enemy fleet being destroyed, the larger operational goals—and possibly, but not necessarily, the strategic goals—may be achieved. But is it possible that naval warfare, in some circumstances, can more profitably be focused on selected highly leveraged platforms (and in the future, on leveraged "nodes" that link vital information flow)? The answer is of great importance to the Navy's major shift from "platform-centric warfare" to a "network-centric" focus.

The 1982 Falklands campaign illustrates the concept of leveraging a naval operation by sinking, or attempting to sink, certain ships. The sinking of the Argentine cruiser *Belgrano* removed the Argentine fleet from further involvement, for a variety of reasons. In contrast, while the British had a number of ships sunk and damaged by aircraft-delivered weapons, the pursuit of a single, conventionally powered Argentine submarine became a virtual obsession for the Royal Navy. The loss of a British carrier, or a heavily laden troop transport, to the torpedoes of this submarine (or any weapon delivered by any platform), could have in a single blow altered the course of that maritime war. On both sides the nature of the use of the modern submarine seems closer to Castex's concept of *maneouvre* than to the attrition suggested by "power warfare." Or is this concept perhaps even better characterized as an example of an attempt to use precisely focused targeting to gain decisive operational and strategic leverage in a naval environment? Remaining as the modern submarine does the closest manifestation of the ultimate stealth platform, is it an instrument for achieving Jan Breemer's "permanent surprise" at the tactical, as well as the operational and strategic levels of warfare? Many submariners think so.

As a submariner, I have long found the idea of maneuver and leveraging through selective targeting and exploitation appealing, because of the stealthy nature of the platform and the finite nature of its resources. Much of the intense

debate over the "Maritime Strategy" of the 1980s centered around the question of whether an aggressive campaign using U.S. attack submarines against selected Soviet naval targets, including their SSBNs, might decisively shift the strategic balance if the Cold War went hot. Fortunately the world was spared an empirical answer. But the massive maneuvering of naval assets by both sides during the 1980s (as well as the importance of naval forces in influencing the 1962 Cuban crisis) suggests that naval operations can decisively impact the political process. In Alexander George's work on the general theory and logic of coercive diplomacy, he discusses "the central task of coercive strategy: to create in one's opponent, the expectations of costs of sufficient magnitude to erode his motivation to continue what he is doing." It will be many years, if ever, before we know the full impact of naval operations, and more specifically submarine operations, on the ultimate outcome of the Cold War. But it is my belief that it was tangible. Does it illustrate naval art? Or maneuver? Or perhaps leveraged influence? Perhaps the implicit nature of the concept is what is important, not a debate about the correct semantic label.

Each of the cases I refer to has a common factor, the introduction of a new technology that fundamentally altered the nature of the conflict as preconceived by the participants. Whether the diesel submarine, the airplane with precision bombing, the nuclear submarine, or nuclear weapons, each moved the modern naval battlefield in a direction not previously anticipated (and generally not appreciated prior to the use of the new technology in a war—if one concedes that the Cold War was in fact a war, as I do). It is not clear that either attrition or maneuver-based concepts adequately address the changing nature of the use of military and specifically modern naval instruments. The question of whether the introduction of new technologies into twentieth century, and future, warfare has impacted decisively, or will, the manner in which one actor forces an adversary to capitulate is perhaps the most important issue facing the current generation of military strategists and force planners. When coupled with a full understanding of the political and strategic nature of war, a high level of training and preparation, innovative warfighting concepts, and orchestrated by the appropriate (often new) organization, technology appears to offer a significant degree of leverage. But modern history suggests that this advantage can be canceled for a variety of reasons. Mark Herman, in his article* on modeling the "revolution in military affairs," asserts that "future warfare cannot be adequately modeled using attrition as the primary measure of effectiveness." He uses the term "entropy-based warfare" as a way "to describe the state of

* Mark Herman, "Entropy-Based Warfare: A Unified Theory for Modeling the Revolution in Military Affairs," Booz-Allen & Hamiliton, Inc., unpublished, copyright 1997.

disorder imposed on a military system at a given moment." He is not alone in this concern with attrition as the sine qua non of war.

Naval commanders need to understand the concepts embodied in the terms "maneuver warfare" and "power warfare." But the history of this century and the changes that the next century will introduce to the naval environment suggest, at least to me, that these theories are inadequate. As such technologies as the submarine, the airplane, nuclear weapons, ballistic missiles, land-attack cruise missiles, and powerful seaborne sensors have each fundamentally altered and enhanced the nature of seapower, so new ideas wedded to powerful linked sensors, computers, and space systems will further modify the concepts that best utilize future naval forces. Perhaps labels like "entropy" or "focused leverage" are not the correct terms, but the implied concepts are worth consideration. If future naval commanders are to exploit fully the powerful leverage that navies should offer in the future, they need to reflect carefully on the nature of the changed and still-changing security environment.

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Reminder to Our Subscribers

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BOOK REVIEWS

A book reviewer occupies a position of special responsibility and trust. He is to summarize, set in context, describe strengths, and point out weaknesses. As a surrogate for us all, he assumes a heavy obligation which it is his duty to discharge with reason and consistency.

Admiral H.G. Rickover

"Who Should Decide?"

Leitner, Peter M. *Decontrolling Strategic Technology, 1990–1992: Creating the Military Threats of the 21st Century*. Lanham, Md.: Univ. Press of America , 1995. 242pp. $47

PETER LEITNER, A SENIOR STRATEGIC TRADE ADVISOR with the Office of the Secretary of Defense, explores the realm of national security policy making within the Coordinating Committee on Multilateral Export Controls (CoCom). His focus is on negotiations conducted between 1990 and 1992, which resulted in the decontrol of a wide variety of strategic technologies. He contends that those decisions will create serious military threats for the United States in the twenty-first century.

CoCom, an informal body largely composed of Nato countries plus Japan and Australia, began negotiations in June 1990 pursuant to President George Bush's January 1990 initiative to review U.S. export control policies. The review, reflective of improved East-West relations, identified fifty technologies in such fields as telecommunications, cryptography, navigation, electronics, and computers for complete or partial decontrol. This "core" list, as the author refers to it, formed the basis of CoCom's debates.

Leitner goes down two tracks in this book. The first illustrates how various technologies that were decontrolled can be turned into military applications. For instance, he refers to a May 1987 incident in which Mathias Rust evaded Soviet air defenses in a small Cessna aircraft, eventually landing in Red Square. This led the Soviets to acquire illegally U.S. computer technology through the Swedish firm DataSaab. By contracting with DataSaab for a civilian air traffic control system, the Soviets were able to obtain technology that was ultimately utilized to upgrade their air defense systems.

The second track is an analysis of CoCom's negotiations. The author uses Graham Allison's models, Irving Janis's "groupthink" theory, Paul K. Davis's and John Arquilla's "limited rationality" hypothesis, and concepts from Roger Fisher's and William Ury's problem-solving dynamics to explain the motivations of the U.S. negotiators that led to the sweeping decontrol decisions. In conclusion, he proposes an alternative model—cybernetics—as more suitable than "political haggling" for determining future technology transfer policies.

Leitner provides convincing evidence of how CoCom's decisions to decontrol various strategic technologies could result in a compromise of U.S. national security. However, his utilization of Allison's and other conceptual models to support his argument that the CoCom negotiations were "sub-optimized" is superficial and unconvincing. He has clumsily peppered his book with names and quotes from renowned group-dynamics theorists, moving with insufficient depth from one to the other in an attempt to justify his position. The result is an incomprehensible leap from analysis to conclusions. Notwithstanding this, Leitner raises some provocative questions. Should government representatives with limited expertise in science and engineering be determining public policy regarding increasingly complex technological matters? Can they fully understand the potential future ramifications of their decisions?

Leitner's book is timely reading for political scientists, students of national security policy, and government policy makers.

Carol J. Figerie
Naval War College

Ullman, Harlan K., and James P. Wade, with L. A. Edney et al. *Shock and Awe: Achieving Rapid Dominance.* Washington, D.C.: National Defense Univ., 1996. 199pp. (Available by request)

Sponsored by the National Defense University's Advanced Concepts, Technologies, and Information Strategies directorate, a seven-member study group composed of distinguished scholars and retired general officers has sought to provide the national security community with a radically new military strategy for a rapidly changing world. The result of their endeavor is *Shock and Awe: Achieving Rapid Dominance*, a futurist-oriented work that seeks "to explore alternative concepts for structuring mission capability packages . . . around which future U.S. military forces might be configured."

At the outset the authors sound a cautionary note. The military and political leadership of the United States, confronting an uncertain world and an era of rapid technological change, must abandon the current military-industrial structure born of World War II and the

Cold War. The authors seek to "replace or complement" the strategy of overwhelming force by exploiting the "revolutionary potential" of existing and emerging technologies for a new doctrine of "rapid dominance." While, as the authors note, it is not a panacea, the objective of rapid dominance is to "impose [an] overwhelming level of Shock and Awe against an adversary on an immediate or sufficiently timely basis to paralyze its will to carry on." Ideally, shock and awe would both paralyze and deter an opponent before the bullets fly. If deterrence fails, rapid dominance would "seize control of the environment and paralyze or so overload an adversary's perceptions . . . that the enemy would be incapable of resistance at tactical and strategic levels."

Unfortunately, it is the reader who is "shocked." While the authors are all eminently qualified to expound on military affairs and strategy, the text is rambling, repetitious, and at times incoherent. The authors did not intend this to be a scholarly tome but expected their work to spark thought and debate. Yet a number of egregious errors call its credibility into question. The reader learns, for example, that "Operation Rolling Thunder III," executed in November and December 1972, brought Hanoi back to the bargaining table, that terrorists bombed the "Kolbah barracks" in Riyadh in June 1996, and that the Israelis struck Syria's nuclear reactors in 1982.

The evidence used to support the concept of shock and awe is uneven. The authors make a strong case for Germany's blitzkrieg campaigns as an example of shock and awe, but sadly, the book's editors are obviously unfamiliar with that Wehrmacht strategy, consistently spelling the German word as "blitzkreig." As in blitzkrieg, rapid dominance produces shock and awe through four elements, including "rapidity." Yet the authors stretch their concept beyond credible limits, endowing the footslogging Roman legions with the ability to produce shock and awe. In an incomprehensible leap of logic, the Nazi Holocaust is classified a "state policy of Shock and Awe." The authors also tell us thar it would be hard to "overstate the importance of information dissemination within Rapid Dominance"; indeed, much of the book is devoted to the critical importance of this strategy of information-based technology. Yet in a warning against "overvisualizing" the concept, the reader is informed that rapid dominance "must still confront the fog of war." While a prudent statement, it also casts doubt on the feasibility of the entire concept.

Shock and Awe offers a new strategy built from assertion and speculation, admittedly leavened with the authors' practical experience. Indeed, at the end of the book retired generals Charles Horner and Frederick Franks and retired admiral L. A. "Bud" Edney provide the reader with insightful essays. Still, these brief appendices cannot salvage this work. Likewise, though the central proposition of *Shock and Awe* is valid, the principal authors have unfortunately cloaked some radical ideas in a poorly organized and edited treatise. Military professionals and national policy makers seeking new concepts for the nation's defense will find them here—but

they will have to look past the text itself for the ideas it promulgates.

MARK J. CONVERSINO
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Fleck, Dieter, ed. *The Handbook of Humanitarian Law in Armed Conflict.* New York: Oxford Univ. Press, 1995. 589pp. $135

In 1992 the German Bundeswehr issued its law of armed conflict manual, *Humanitarian Law in Armed Conflicts* (Joint Service Regulations 15/2). As an official statement of the legal norms that Germany (a key Nato member and pivotal player in the international arena) believes applicable in armed conflict, the manual necessarily helps refine, clarify, and reinforce tbe content of humanitarian law. *The Handbook of Humanitarian Law in Armed Conflict* complements this process; it is an unofficial commentary on the manual's provisions by an impressive array of European scholars and practitioners. Under the editorial direction of Dierer Fleck, the German Ministry of Defence's noted international law expert, the group has produced a comprehensive analysis of the subject, one which is easily equal to anything else currently available.

Christopher Greenwood opens the book with a superb chapter discussing the historical development of humanitarian law. Focusing first on the *ius ad bellum* (the law governing the resort to force), Greenwood broadly interprets the UN Charter Article 2(4) limitations on the use of force by restricting them to situations involving enforcement actions under Chapter VII or self/collective-defense under Article 51. He extends the latter right to actions against terrorists when the underlying terrorism would allow a forceful response if committed by a state. Greenwood also contends that self-defense may be undertaken anticipatorily (when the threatening act is imminent but still prospective), reasonably asserting that the real issue is not *whether* it is permitted but rather *at what point in time.* With regard to the controversial issue of humanitarian intervention, he guardedly suggests that the interventions to protect Iraqi civilians may reflect the emergence of a new permissive norm in response to "extreme humanitarian necessity."

Turning to the *ius in bello* (law governing activities during armed conflict), Greenwood argues that differences among Nato allies in the applicability of various treaty regimes, particularly Protocol I Additional to the Geneva Conventions, have been exaggerated. Citing disputes over reprisals and restrictions on striking dams, dikes, and nuclear electrical-generating stations, he suggests that they are in the end "unlikely to present insuperable obstacles for NATO." He also advances the proposition that in the Charter era, the principle of necessity—long a *ius in bello* principle limiting the amount of force used to that necessary to subdue the enemy—has taken on *ius ad bellum* implications. By his interpretation, articles 2(4) and 51 were intended to survive the outbreak of hostilities. Therefore, only that force necessary to defend oneself with sufficient surety is permitted, absent authorization otherwise as part of a Chapter VII enforcement action. This may or

may not allow the complete defeat of one's enemy.

In the chapter on combatants and noncombatants, Knut Ipsen attempts to clarify the manual's somewhat muddied distinction (perhaps merely a result of translation from the original German) between the terms. He also provides an interesting discussion of the German application of the controversial Protocol I provision eliminating, under certain circumstances, the requirement that combatants wear uniforms or display distinctive emblems when engaging in hostilities. The United States opposes this provision, as well as another accepted by the Germans that severely limits the applicability of combatant status to mercenaries.

A highlight of the book is clearly Stefen Oeter's commentary on methods and means of warfare. He begins with an excellent introductory discourse detailing the development of modern limitations on them, and he offers as well a useful section on the relationship between treaty and customary law. Of particular note is his analysis of nuclear weapons. Although the German manual states that there is no "current contractual or customary" ban on the use of such weapons, Oeter correctly characterizes this position as, quantitatively, the minority view among states. That said, he goes on to question assertions of illegality, pointing out the argument's logical and legal flaws.

Chapters on protection of the civilian population and the wounded, sick, or shipwrecked, by Hans-Peter Gasser and Walter Rabus respectively, follow. Each, particularly the former, constitutes a comprehensive review of its subject. Equally well done is a chapter by Horst Fischer on prisoners of war, though some may find a bit troubling his criticism of the treatment of Iraqi students (reservists) as POWs who were studying in England during the Gulf war, as well as his critique of the U.S. practice of binding prisoners. Nevertheless, Fischer's commentary is rich in detail and historical examples. So too is a chapter by the late Karl Josef Partsch on the protection of cultural property.

For readers of the *Naval War College Review*, the chapters on naval warfare by Wolff Heintschel von Heinegg and on neutrality by Michael Bothe are "must reading." In particular, von Heinegg draws attention to consequential differences between U.S. and German views of naval warfare. First, whereas the United States would permit an attack on an armed enemy merchant vessel even without warning, Germany would not consider armament alone, without some additional act, such as carrying military supplies, as sufficient reason to attack. Additionally, while Germany prohibits the laying of mines beyond one's own territorial sea during peacetime, the United States does allow the practice with controlled mines, so long as they do not interfere with lawful uses of the oceans by others. Finally, the German manual provides criteria for the formal establishment of maritime exclusion zones (the U.S. manual, NWP 1-14M, views them as mere warning zones, which may not unreasonably interfere with legitimate neutral commerce). Interestingly, von Heinegg's discussion of exclusion zones makes clear that the two sides are closer than might appear at first glance, for ultimately neither

country would permit the targeting of other than legitimate military objects in such zones. Instead, for von Heinegg the zones simply serve to lessen the impact of the principle of distinction on targeting.

In the chapter on neutrality, Michael Bothe urges the view that reports of the death of neutrality at the hands of the UN Charter's collective security regime are greatly exaggerated. He perceptively notes that collective security is a right, not an obligation requiring affirmative action. Moreover, Bothe distinguishes between enforcement actions under the direction of the Security Council and those in which the Council merely authorizes member states to act. In the latter case, nonparticipation is permissible, thereby allowing the neutrality law to retain its normative valence. Bothe also offers an insightful analysis of the timing of neutrality status, an important naval issue because during armed conflict neutrality may affect navigational prerogatives of belligerent navies. Finally, it is interesting that Bothe finds the reflagging of Kuwaiti tankers during the Iran-Iraq conflict inconsistent with international law, arguing that Kuwait was engaged in "non-neutral services" to Iraq, a fact which might have justified Iranian reprisals (his term) against Kuwaiti vessels.

Rudiger Wolfrum concludes the commentary with a discerning analysis of humanitarian law's enforcement regime, emphasizing the punishment of war crimes. Three very useful appendices (on relevant agreements, distinctive humanitarian law emblems, and a listing of the world's military manuals) are included, as well as an extensive bibliography centered on European sources.

As a cautionary note, *Handbook* readers should remain sensitive to the fact that it is not the official "annotated version" of the German manual but instead a compilation of commentary on it by noted experts in the field. So armed with an understanding of what the book is and is not, one is left with a work that no serious practitioner or scholar in the field should be without. It has rapidly become a standard, and deservedly so.

MICHAEL SCHMITT
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Ruggie, John Gerald. *Winning the Peace: America and World Order in the New Era.* New York: Columbia Univ. Press, 1996. 237pp. $27.95

John Gerald Ruggie is Burgess Professor of Political Science and International Affairs at Columbia University, where he served from 1991 to 1996 as dean of the School of International and Public Affairs. He has written several other books on world order and international affairs. Ruggie has also served as consultant to several U.S. government agencies, as well as to the United Nations.

This work is the result of a study conducted by the Twentieth Century Fund to provide insights into what changes the United States might make in its post–Cold War foreign policy.

The author's first task, however, "is to clear up the rhetorical obfuscation that results in the use of such terms as 'internationalism,' 'isolationism' and

'idealism' in the current policy debate. None means quite what its protagonists claim." He points out that these terms were valid but today do not reflect such world order as the United States has implemented or would be likely to implement in the future. Ruggie defines "multilateralism" as a modified term for internationalism, "unilateralism" for isolationism, and "realism" for idealism. He then provides an excellent overview of the kind of world orders desired by the United States at the beginning of the twentieth century, after World War I, and after World War II. He also examines the institutional legacy left at the end of the Cold War.

Unilateralism was practiced by the United States from the end of World War I up to the attack on Pearl Harbor. The United States pursued a unilateralist approach to its security order and relied on bilateral treaties in economic agreements. The lesson drawn from this posture was the folly and high cost of leaving the most fundamental decisions concerning war and peace in the hands of others, often one's adversaries. Observing that the United States was being drawn into world war for a second time in one generation, President Franklin Roosevelt began almost at once to plan a postwar order in which the United States would be solidly anchored and the likelihood of future collapse would be greatly reduced. Early in 1943 Roosevelt proposed to the British foreign minister the idea of a United Nations, in which the major powers would play a special role in the world economy. This was the beginning of a multilateralist plan in international relations.

Realists such as Henry Kissinger believe that international political order inevitably will become multipolar during the first decade of the next century. The majority of realists feel that Germany and Japan will join the existing five major powers (China, France, Great Britain, Russia, and the United States) in the multipolar order. There will be a balance of power that will probably include nuclear capability for the new members. According to Ruggie, the realists believe in a much stronger military than the one in place during the Cold War, although they do not offer much practical guidance on how to pay for it.

The remainder of the book is devoted to an examination of the security order options open to the United States for "winning" the post–Cold War peace. Ruggie offers the following recommendations and assessments. (1) An overall foreign policy must put the United States in a position to defend and vindicate (on its own if need be) both its immediate interests and core values, while working with coalitions of the willing to pursue broader and longer milieu goals. (2) The domestic context is compatible with such a prudential yet progressive foreign policy orientation, since the public continues to support a relatively strong national defense. Maintaining the military capacity to meet the nation's needs should not prove inordinately difficult. (3) A core element is continued involvement and support of Nato; but Ruggie sees no compelling logic to extend Nato security commitments before greater consolidation of Nato's European pillar has taken place. (4) Active United States

involvement in East Asia is every bit as necessary as Nato involvement, from a strategic vantage point. (5) For areas other than Nato and East Asia, the United Nations should do the job. (6) A multilateral approach should be utilized for future international economic policy.

Each item has conditions that must be met, and implementation must be balanced. Reggie notes that it will not be easy.

JOHN T. COUGHLIN
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Sokolski, Henry, ed. *Fighting Proliferation: New Concerns for the Nineties.* Maxwell Air Force Base, Ala.: Air Univ. Press, 1996. 377pp. $23

This book, edited by Henry Sokolski of the Nonproliferation Policy Education Center, advances the antiproliferation literature focusing on new threats and proposing alternative approaches to thinking about proliferation. The message is clear: new dangers from proliferated technologies and capabilities pose real challenges that require comprehensive solutions and long-term perspectives.

This policy-relevant volume retains a healthy skepticism regarding proliferation. Kenneth Waltz, Martin van Creveld, and others suggest that nuclear weapons enforce a rationality without regard for national differences. *Fighting Proliferation,* however, is implicitly premised on the realization that proliferation is a long-term dynamic tied to global trends, while certain regimes with proliferated capabilities do threaten the United States. Sokolski includes two balanced sections that analyze North Korea and Iran.

Proliferation threats have become diffuse, ranging from deliverable nuclear, biological, and chemical (NBC) weapons to conventional weapons, and the enabling components and processes. Many analyses have focused on high-profile categories—particularly nuclear weapons and ballistic missiles. Sokolski, however, focuses on the strategic implications of satellite imagery and cruise missiles. But some observers argue that the effect of proliferation is not dangerous; Iraqi forces were dispatched with ease. Further, the performance of U.S. forces in the Gulf war apparently promises military-technological dominance against inferior opponents.

David Blair's chapter, however, demonstrates how U.S. power projection can be thwarted given the availability of technology and weapons, and the reduced number of overseas bases. This analysis challenges those who assume that the United States is so powerful and technologically advanced that its future position is assured. Instead, the technological, doctrinal, and organizational advancements of the last twenty-five years, and for the foreseeable future, are available to others as well.

Sokolski's suggestions for strategic responses are thoughtfully assessed. Diplomacy and arms control have been the primary tools used to stem proliferation. But given the accelerated rate of proliferation, the general porousness of control regimes, and the impact of the Gulf war and the 1993–1994 Korean crisis, capabilities to counter proliferation and protect U.S. troops are more

salient. Technology diffusion is a long-term issue, though, and solutions ought to be integrated and designed for the long term. David Andre's chapter on competitive strategies and Sokolski's on intelligence requirements exemplify sound analytic approaches to the proliferation conundrum.

The section on strategic responses, however, could have been improved by elaborating on various ideas. A preliminary attempt to devise a competitive strategy against North Korea and Iran would have been interesting, as would have an illustration of Sokolski's approach of constructing future scenarios and then deducing solutions. Furthermore, although this section was designed "to get beyond the negative goal of limiting possible damage," new analytical approaches are untested and will not eliminate the need for new capabilities. The most important capability to counter proliferation is theater-based and strategic-missile defense that enhances deterrence, power projection, and warfighting.

Most chapters are well researched and analyzed, particularly those by Blair, Steve Berner, Dennis Gormley, and K. Scott McMahon. But some, for example a debate concerning commercial satellite export-control policy and a chapter on South Korean concerns after the United States–North Korean nuclear agreement, are on important subjects but do not contribute effectively to the volume's message. The satellite export debate revolves around a 1994 presidential decision, of which the subject and implications are more clearly portrayed in Berner's chapter on the proliferation of satellite imaging capabilities. As to Seoul's nuclear concerns, Victor Gilinsky's chapter raises questions without meaningful data, analysis, or assessment.

Other key proliferation concerns that could have been usefully included in a book on "new concerns for the nineties" are not covered. For instance, biological and chemical weapons employment may be more likely than nuclear. NBC terrorism and other asymmetric attacks are not broached, despite the March 1995 Sarin attack in Tokyo, continuing reports of smuggling, the abundance of plutonium, and lax control in Russia over NBC-related material. Space launch vehicles and their relation to ballistic missile delivery systems are not addressed. This is an important subject, given its bearing on satellite imagery and space technology proliferation. Ballistic missiles remain the proliferator's weapon of choice. Further, it is curious, having given so much attention to space-related issues, that Sokolski does not address maintaining military superiority in space and denying space as an operational medium.

Despite these few gaps, however, Sokolski's book will provide substantial value to the national security community. It deals convincingly with new proliferation threats that must be recognized and addressed. Additionally, Sokolski forwards important arguments and methods of thinking about proliferation as a long-term problem, one whose solutions will require of the United States a deft manipulation of foreign and defense policy tools.

PHILIP L. RITCHESON
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Alberts, David S. *Defensive Information Warfare.* Washington, D.C. National Defense Univ., 1996. 80pp. (Available on request)

If you are a senior policy maker or someone involved in crafting legislation or regulations regarding information technology, this book is for you. David Alberts, director of the Advanced Concepts, Technologies, and Information Strategies directorate at the National Defense University, presents a succinct overview of information warfare defense, enumerating the challenges posed by the increasing reliance of the United States on quick and open access to information, and developing a framework for finding solutions.

Alberts defines information attacks as "attacks on decision makers, the information and information-based processes they rely on, and their means of communicating," but he focuses on attacks against information infrastructure. He compares information warfare defense to efforts to combat disease, requiring the same constant vigilance by public and private institutions, acting in concert. According to Alberts, direct economic damage from an information attack is a less significant threat than the potential that citizens will lose confidence in the government's ability to protect them. For example, if a large number of U.S. citizens were to lose confidence in the security of the banking system, the economic consequences could be far more severe than any direct information attack.

Most discussions of information warfare acknowledge difficulties in determining the players and ascertaining their motives, since the threat is as likely to arise from actors like economic competitors or criminal organizations as it is from states and terrorist organizations. Alberts does not resolve these difficulties but attempts to bound the problem by developing threat topology and characteristics. He allocates responsibilities for the everyday threat to the private sector, the strategic threat to the public sector, and the "potentially strategic threat" to a combination of both.

Alberts participated in a series of war games conducted by the RAND Corporation, and from them he draws the unsurprising conclusion that in order to respond to information warfare attacks effectively the United States requires more awareness and understanding of the nature of its own capabilities and vulnerabilities. Additionally, he recommends the development of defense in depth for information warfare, including a system of alerts (with required actions to be taken at each level) and a battle-damage assessment process.

This book is a short overview intended for high-level policy makers. It is refreshingly free of computer jargon, and Alberts defines each new term, which makes the topic more accessible to the average reader. Unfortunately, he does not include any examples or possible scenarios, which would have clarified his points.

Systems administrators may find this book somewhat frustrating, in that it emphasizes the need for action without providing much help in how to go about it. Nonetheless, those trying to understand what information warfare

defense is all about will find this book a worthwhile investment.

LILLIAN A. BURKE
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Haydon, Peter T., and Ann L. Griffiths, eds. *Multinational Naval Forces: From Theory to Practice*. Halifax: Dalhousie Univ. Centre for Foreign Policy Studies, 1996. 261pp. $19.95 (CDN)

Thomas, Robert H. *Multinational Naval Cooperation* (Maritime Security Paper no. 3). Halifax: Dalhousie Univ. Centre for Foreign Policy Studies, 1996. 98pp. $9.35 (CDN)

Multinational Naval Forces documents the proceedings of a three-day workshop held at the Centre for Foreign Policy Studies in July 1995. It brought together many international participants, including representatives from the U.S. Naval War College and the Center for Naval Analyses. As might be expected, however, the majority of those who attended were from the Canadian Maritime Command and the Centre itself. The purpose of this workshop was to "examine the interplay of political, military, and other factors that govern the ways by which ships of different navies can work together." Participants looked at three issues: interaction of political and military planning criteria and concepts, civil-military relations, and the impact of the media. These were examined under the rubrics of planning, organizational concepts, and lessons learned from recent Canadian experience. Individual chapters (although not organized as such) document the individual presentations and cover such varied topics as "Media Relations and Multinational Naval Operations," "Is a Standing UN Naval Force Realistic?" and "Canadian Coordination of the Persian Gulf Combat Logistics Force."

The editors admit that when a workshop covers as many and as varied topics as this one did, it is sometimes difficult to draw conclusions. Still the papers carry one common thread: that multinational naval operations can work and achieve success, but the key is planning, and the biggest impediment is the disconnect between political expectations and military capabilities.

Multinational Naval Cooperation was published as Maritime Security Paper no. 3 by the Centre, an internationally recognized institute for the study of maritime security and oceans policy. It examines the evolution of multinational naval cooperation, noting that the precedent had been set at the Battle of Salamis (480 B.C.), when a naval alliance of Greek city-states successfully cooperated in the defeat of the Persians. However, specific details begin with World War I and trace the varying models for cooperation up through the intervention in Haiti in 1994.

Robert Thomas, the author of *Multinational Naval Cooperation*, is a retired captain in the Canadian navy with over thirty years of experience in both operational and staff assignments. Thomas holds both a B.A. and an M.A. from the Royal Military College. He is a graduate of the Canadian Land Forces and Canadian Forces Command and Staff colleges, and he directed National

Security Studies at the latter. His final tour of duty was as Director of National Security Studies at the National Defence College. Since retirement, he has published extensively on Canadian and international security issues.

His monograph brings home quite clearly the changing role of naval cooperation over the last eighty years. Thomas notes that the change has had significant impact on nations with small to medium navies. He uses history quite effectively to put the present in context and introduce how the future of naval cooperation will be affected. He observes with great clarity the challenges facing increased naval cooperation, categorizing them as strategic, political, operational, and professional.

By far, the work's most significant value lies in the final two chapters, wherein Thomas projects what the future might hold and then draws his conclusions. He notes that the demise of the Warsaw Pact and the end of the Cold War make participation in multinational naval cooperative ventures less attractive for many nations whose national pride need no longer be swallowed up by American leadership. Conversely, the realities of U.S. naval downsizing may produce a more selective intervention policy by the United States, particularly in those areas where its interests are minimal.

For the naval professional, both *Multinational Naval Forces* and *Multinational Naval Cooperation* cover familiar ground, and in that regard one might be tempted to relegate both to the pile labeled "old news." Still, in the same fashion that the U.S. military is evolving more and more toward increased interoperability, there is a need for the navies of the world to follow the same path. Both books do an excellent job of summarizing the key issues. For those who have never worn a naval uniform, or who have only passing knowledge of cooperative naval operations, or have never heard of the Nato Standing Naval Forces in the Atlantic and Mediterranean, these books will provide an excellent summary on the subject.

JAY R. AVELLA
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Gray, Chris Hables. *Postmodern War.* New York: The Guilford Press, 1997. 314pp. $23.95

Any book that contains as its last two sentences the observation that "War is very strong. We must be stronger" would seem to have worked with great vigor toward a conclusion that is worthy only of reproduction as a bumper sticker. Fortunately, the journey Gray offers us is more interesting than his destination. This book is an exploration of the current state of the military and warfare, supported by a historical explanation of how both came to be as they are.

The title may be troublesome, sending some potential readers elsewhere at first glance. "Postmodern" suggests methods of examination rooted in literary and cultural criticism, not security affairs, and many believe that postmodernism is ill formed, silly, or so self-referential that it defies its own definition. There are certainly such elements in this work, many of them extremely frustrating, even infuriating, but there are also points at

which Gray precipitates issues concerning the nature of today's and tomorrow's military into statements and positions that ask us to examine our thoughts in using larger sets of rules.

"Postmodern" refers to the period in which the drivers of modernism (art, science, technology, progress, democracy, nationalism) have been called into question as their internal mechanisms are revealed, creating disillusionment. With regard to the military, as well as to the author's thesis, science and technology are the most relevant. We have now created, and appear to be ready to rely upon, a military built upon a scientific and technological base that has been assumed in the past to be "value free"—that is, objective efforts that offer the users only tools, without beliefs attached. In this realm, postmodernism's themes center around information as an organizing principle, the domination of knowledge by "the market, the battle and the scientific method," an increase in speed ("the Cartesian grid has become a Cartesian box"), and the proliferation of human-machine interaction as a cultural fact of life.

Gray summarizes in Part II, "The Past," that war is a "discourse," an interaction with rules, limits, and conversational components. These components have changed over time. The most important of them to modern war have been the application of rationality instead of tradition, the development of bureaucracies, and the "systematic application of science and technology." Postmodern war is the dilemma in which we find ourselves today—technology and rational thought have brought us to the brink of a force-planning and wartime-execution environment which will enable us to conduct war with more force and power, and less risk and damage. Does this phenomenon, in a grim irony, produce two dangerous possibilities? First, will the populace no longer participate in wars to the degree they have in the past, leaving the military to fight at will with weapons that are essentially cyborgs? Second, will this new "manageable contest of intelligent machines in cyberspace," a less horrible prospect to all, therefore be an aid to a more horrifying future in which war is so easy that it may be undertaken with less thought?

Along the way, Gray applies the themes of his book to some issues that may seem peripheral at best: how the technological transformation of war affects notions of gender, and thus the roles of men and women in war; whether peace has become the justification for war; whether there is a continuing potential for asymmetries in future conflicts. Some of these may seem out of place to readers used to more traditional examinations of the military. They nonetheless add a dimension to the book that is worthwhile, even if they seem deliberately provocative.

There are some annoying methods that distract from the reading experience. Gray has a habit of citing the writings of reputable military theorists and historians in "as quoted in" fashion, using words that are closer to his own intellectual interests than the originals might be. We thus have the potential for an "out-of-context-context" phenomenon, which puts the reader

slightly ill at ease. The impression, accurate or not, is that Gray did not read the originals and may be using the observations in ways that the writers or speakers did not intend.

There is much to consider in this book. Even if its culmination leaves one cold or angry, a dramatically different point of view can be a tonic, even to those who have already made up their minds.

DAVID SMITH
Commander, U.S. Navy

Macgregor, Douglas A. *Breaking the Phalanx*. Westport, Conn.: Praeger, 1997. 283pp. $24.95

With *Breaking the Phalanx*, Colonel Douglas Macgregor has accomplished what all military authors aspire to but few achieve. By calling for striking—some would say radical—change in how the United States Army structures and employs its combat forces, Macgregor has captured the attention of his service's leadership and inspired a genuine debate. The Army that emerges from this debate will likely incorporate some, though not all, of Macgregor's ideas. By fueling discussion and injecting fresh and provocative concepts and thinking, his contribution to the Army of the next century will be both lasting and significant.

An accomplished scholar and writer, as well as a distinguished combat soldier in his own right, Macgregor begins with a strong defense of the continuing relevance and utility of landpower. Refuting air advocates who claimed "decisive" roles for their service in the Gulf war, he argues convincingly that "without landpower, airpower and seapower cannot be strategically decisive." Arguing that all conflicts are ultimately about control of populations and resources found on the land, Macgregor asserts that strategic landpower remains central to American preeminence in the next century. While service enthusiasts will no doubt continue to debate questions of service primacy, Macgregor is on firm ground in arguing that a strong, healthy capability on land, as well as at sea and in the air, is the essence of American military power—not a military establishment weighted toward any one.

Having made a plea for landpower's rightful place in our strategic calculus, Macgregor moves to his central theme: how to shape the Army for the next century. Here he boldly calls for the death of the division—heretofore the lowest all-arms formation capable of sustained combat—in favor of the "combat group," a combined arms formation of brigade size with organic maneuver, fire support, and logistics units. These groups would be organized and equipped by function and mission.

Thus "heavy" combat groups would conduct "decisive" maneuver operations. "Airborne/air assault" groups would conduct forced entry and economy-of-force operations. "Recon-strike" groups would conduct traditional cavalry missions to screen and secure the main force. Macgregor sees, in pushing the Army's organizational focus downward, major savings in end-strength by doing away with divisional staffs and headquarters troops.

How this force might fight a "future war" is described in a fictional scenario set in Southwest Asia. While incorporating next-generation technologies, the author points out the dangers of overreliance on "silver bullets": when the enemy manages to field passive systems able to detect stealth platforms, "dominant battlespace knowledge has turned out to be an illusion!" The message is clear. Precision guided systems and information warfare will matter greatly, but war will still be messy, plans will fail, and the clash of arms on the ground will remain at the heart of mankind's continuing fascination with war.

Many of Macgregor's proposals push the envelope hard. Still, upon reflection, much of his thesis intuitively compels. The arguments and counterarguments to come (and there will be many) will be based as much on the response of threatened communities within the Army as on implications for warfighting.

To be sure, Macgregor is vulnerable to criticism on the merits. A career cavalry officer, his dismissal of light infantry reflects a measure of branch bias at odds with the realities of combat in close terrain. His superficial treatment of logistics and sustainment is a weakness that is sure to draw close scrutiny. Eliminating the division as an echelon of command, absent a hard and objective look at the downside (the obvious disadvantage being an inherent span of control problem, with numerous groups reporting to a single joint task force), will not attract much support from senior leaders who are well aware of the division's proven flexibility and staying power.

Yet *Breaking the Phalanx* is an important book that may well endure. Though most military professionals realize that the United States stands at the dawn of a new era in warfare, few step "out of the box" with Macgregor's force, clarity, and relish. Highly readable, always interesting, his thrusting logic grapples resolutely with the possibilities. Douglas Macgregor has put a mark on the wall and challenged the system to do better. His book deserves careful reflection by all professionals concerned with the common defense.

R. D. HOOKER, JR.
Major, U.S. Army

Farer, Tom, ed. *Beyond Sovereignty: Collectively Defending Democracy in the Americas*. Baltimore, Md.: Johns Hopkins Univ. Press, 1996. 416pp. $19.95

The United States is fortunate to be in a hemisphere relatively free of the recent troubling regional trends. One such trend is the deterioration of states, resulting in the unraveling of economies and the breakdown of civil society and its complementary form of democratic government. Perhaps, however, the withering away of the state is creating a positive effect in Latin America and the Caribbean. As *Beyond Sovereignty* reveals, state sovereignty is diminishing as a result of this hemisphere's growing dedication through "collective defense" to the full political institutionalization of democracy. *Beyond Sovereignty* explains this regional trend, which the United States must apprehend as one of the most positive

geopolitical dynamics within the current "Revolution in Security Affairs."

Beyond Sovereignty is a collection of studies by distinguished scholars on Latin America and the Caribbean. They focus on the institution of democracy and its "collective defense" in the region by a variety of state and nonstate actors. They are the result of an exploration by the Inter-American Dialogue of a call by the Organization of American States (OAS), in Resolution 1080, for "collective" responses to violations of the democratic process within the Americas. The studies examine the roles of governments and political movements within the various countries, the effects of U.S. policies, and the political forces within international and nongovernmental organizations that are subsuming state sovereignty in terms of the region's adherence to the strengthening of democracy. The book features case studies of a retrospective nature on Chile, El Salvador, Haiti, and Peru, and the struggles within those countries relative to the establishment of democratic political practices. The book also provides studies that look toward the futures of Mexico and Cuba and what they may hold with regard to the respective enlargement and the eventual establishment of democracy in those countries.

Beyond Sovereignty correlates the rise of democracy's strength, as a political institution in Latin America and the Caribbean, to the decrease of state sovereignty based on collective defense. In the region, the state and its sovereignty is giving way to political and suasive power from international organizations, principally the OAS, but also the United Nations and nongovernmental organizations (NGOs), such as the World Bank. These external actors share a focus on building democracy as a political institution within the region—the OAS from its political "peer pressure," and the NGOs by aiding the positive social forces that support the growth of sound, expanding economies and the formation of civil society. The OAS and proliferating regional political forums are growing intolerant of any tendency by states to dismiss democracy as the preferred political system. These forums' ability to effect their political will in support of democracy is what defines collective defense.

The book also examines related political and governmental institutions necessary for the success of a democratic country: fully representative political parties that permit and encourage pluralistic expression, an effective independent judicial system, and a competent civil service. The strength of these related components is vital in a democracy. The new crumbling of state sovereignty in favor of regional interest in democratic politics is resulting in less internal dependence upon agrarian reform and labor movements, the clash of class interests, and guerrilla activity as the principal source of pressure on states in the region to democratize fully.

Despite the possibly distracting reference to "collective defense," this book does not focus on the military problem of defense but rather on the political problem of defending democratic political institutions. In this vein, its studies circumspectly characterize the military as a historically

counter-democratic force. Plentiful regional historical evidence demonstrates that the military has been ambiguously involved in some countries' internal "nation-building" activities. This contributed to the regional model for a military *junta* system of government that cynically manipulated social conditions to sustain itself and thereby formed the greatest threat to the political institution of democracy in the region.

Given this unfavorable conclusion about the military's role in the region's various countries, themes in this work should concern the military-minded readers of the *Naval War College Review*. Included are discussions of the troubled history of civil-military relations in the countries of the region. But with the establishment of democracy in the region has come the placement of the military in its proper role as an instrument of the government's political will, and not the other way around. Also, there is focus on the international approach toward preserving democracy in Latin America and the Caribbean. The "collective defense" alluded to is the intervention by fellow Latin American countries in support of democracy in a region where the most significant threats to that political institution generally have derived not from external state sources but disruptive internal politico-military actors. Consequently, *Beyond Sovereignty* exposes the region's growing political tendency to recognize the obsolescence of the military with regard to defending democracy in the context of the state's power. The ascendancy of regional adherence to (and political enforcement of) the ideal of democracy is supplanting the state and its associated Clausewitzian military complement.

With plentiful history to draw upon, *Beyond Sovereignty* is not ambiguous about the worst effects of U.S. policy toward the region. It has applied its heavy hand in the region many times. Offering explicit support for various authoritarian regimes during the Cold War, the United States traded away democracy for the expediency of anti-communism. The book is forthright in asserting that this region is not likely to tolerate further applications of a unilateral, coercive U.S. approach. The studies emphatically demonstrate, through analysis of recent regional collective defense efforts, that the region's countries are determined to choose appropriate internal measures for application of democratic political principles, and not tolerate U.S. hegemonism.

This particular phenomenon implicitly exposes a significant problem with which the United States will have to struggle, since one of the top OAS priorities is to stop illegal drug trafficking in the region. A strong case can be made that internal U.S. social conditions are behind the hemisphere's illegal drug problem, which is now the most severe condition imperiling the institution of democracy. In this light, regional political dynamics are bound to increase insistence that the United States solve its internal problems, which threaten the region's ability to have responsible democratic government and the political conditions that sustain it. With an eye to the "collective defense" approach, the United States eventually will have to address its drug problem in

the context of the threat it poses to democracy in the hemisphere.

The importance of the ideas in this work is abundant. For years the United States has paid little more than lip service to the cause of democracy in Latin America and the Caribbean. History shows no room for doubt that U.S. intervention in the region has been problematic in the political realm, and often disruptive to social forces struggling to find expression for their interest in democracy within the countries that received U.S. "help." Yet *Beyond Sovereignty* demonstrates that in this hemisphere, effective regional cohesion around the idea of democracy has never been more powerful than it is now. In a world in which regional forces are shaping the future, the United States must devise policies to promote this positive force for democracy in its own geopolitical neighborhood.

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Wiarda, Howard J. *Democracy and Its Discontents: Development, Interdependence, and U.S. Policy in Latin America*. Lanham, Md.: Rowman & Littlefield, 1995. 367pp. $27.95

Two major approaches dominate comparative politics research—a universalistic, scientific approach that emphasizes similarities and regularities among the world's political systems, and a more traditional "area studies" perspective that emphasizes distinctive features of different geographical areas. The first approach (deeply influenced by the so-called rational choice or public choice theory) seeks to develop social-scientific theories and hypotheses that can be empirically tested and verified. Traditional area studies, by contrast, seek to explain the behavior of political actors and governmental institutions based on the history, religious values, cultural traditions, and the social and economic structures of a particular region. For area studies specialists, understanding the politics of developing nations, especially non-Western states, is impossible without first studying their language, culture, and history.

Howard Wiarda, a political science professor affiliated with the Washington, D.C.–based Center for Strategic and International Studies, is a scholar of the traditional area studies school. Long regarded as a leading specialist on Latin America, Wiarda has written extensively and incisively on the politics and government of the Western Hemisphere, as well as on U.S.–Latin American relations. The book under review is a wide-ranging collection of previously published essays covering key issues in contemporary Latin American politics and relations with the United States. Some of the important themes discussed are legal and political traditions, the notion of the state, political reform, democratization, human rights, and U.S.-Caribbean relations.

As a traditional area-specialist, Wiarda writes that to understand Latin America's struggle for democracy "one has to go back to history." For him, this means understanding the region's distinctive traditions, social values, and cultural norms that have evolved since the Spanish conquest. Wiarda argues that Latin America's tradition of a strong

state is rooted in hierarchical, elitist, and corporatistic values derived from the sixteenth-century tradition of neo-scholasticism. More specifically, he asserts that since the Latin American democratic traditions have been based on Thomistic and Rousseauian ideals, the region's constitutional practices have resulted in centralized, organic, and corporatistic structures designed to carry out "the great and glorious ends of government." By contrast, the North American constitutional norms have been based on Lockean, Madisonian, and Jeffersonian principles that have fostered radically different governmental structures based on consent, majority rule, separation of powers, and checks and balances. Wiarda observes that while the North American emphasis on process and constitutional procedures has resulted in pragmatic, prosaic decision making, the U.S. regime has been stable and durable. But the failure of Latin American regimes to give sufficient attention to constitutional decision-making procedures has led to more rigid and fragile regimes.

Wiarda argues that U.S. policy of trying to replicate in Latin America Westminster-style democratic practice has been misguided and ineffective, reflecting at best a limited understanding of the region's history and traditions, or at worst a profound hostility to it. While he correctly questions the wisdom of implementing policies that superimpose values and traditions on foreign countries, Wiarda's analysis would have been more credible had he outlined strategies that would advance the consolidation of Latin American democracy without neglecting the region's distinctive cultural and historical traditions. If U.S. insistence on competitive elections is not the only road to democratic government, how should the United States attempt to encourage and sustain the consolidation of democratic systems? We can agree with Wiarda that U.S. policy makers need to be informed about the region's values, traditions, and cultural norms, and to pursue U.S. interests with sensitivity and nuance. But having recognized the need for an informed and sensitive policy, the challenge for U.S. officials is how to advance democratic ideals and practices even when such ideals may conflict with regional cultural sensitivities.

"Latin America," writes Wiarda, "has a system of politics that, in many ways, is uniquely its own." Persons wishing to become more familiar with some of the distinctive features of the region's politics will find many of the book's essays stimulating and worthwhile, providing penetrating assessments and critiques on important domestic and Western Hemispheric issues. While readers may differ with Wiarda's judgments and policy conclusions, they will find his analysis informed and his scholarship sound.

MARK R. AMSTUTZ
Wheaton College

Baldwin, Sherman. *Ironclaw.* New York: William Morrow, 1996. 265pp. $24

Sherman Baldwin touches the elephant and describes it. But unlike the people in the famous fable, he is not blind. Nor is the item described as small or as

commonplace as an elephant. Those are two of the things that make this book worth reading. There are others.

"Tank" is the call sign the new naval aviator gets from his carrier-based EA-6B squadron mates. But call sign aside, this is no clumsy anachronism. In recounting his DESERT STORM memories, Tank demonstrates a sharp eye, keen insight, sensitivity, humor, and a sharp pencil. If he were not a good "stick" he would not have been assigned to a Prowler squadron embarked in USS *Midway* on its way to war. The author recounts events, procedures, and emotions that have slipped into a dim past for most of us: the transition from flight school to the fleet, the first encounter with new squadron mates, finding one's way around the carrier's labyrinth (he gets some of *Midway*'s tortuous anatomy wrong), first combat mission, first true love. The detail of this work flooded this reviewer with memories and emotions. Yet those who are not naval aviators will also find it fascinating and entertaining.

Besides its treating the commanding officer of USS *Midway* favorably, the book also attracted me because it is a look into the quick mind of a very bright junior officer under great stress. Except for the familiar cockpit of the EA-6B, everything is different, especially the prospect of being the target of Iraqi missiles. Thankfully for Tank and his many fellow aviators over Iraq, there are few of those. Lieutenant (junior grade) Baldwin, like everyone else, does not know that Saddam Hussein is going to be a pushover. So the tension is real. Add to that the difficulty of inflight refueling, a missed rendezvous in marginal weather, and some terrifying night landings on *Midway*'s small flight deck, and anyone's confidence would be rattled. Tank finds little support from his squadron commanding officer, whose leadership style is treated in unflattering terms. Right or wrong, the author calls it as he sees it. You cannot ask for more. In the end Sherman relies on his shipmates' good training, his inner strength, and the prospect of seeing his future wife waiting for him on the pier, to see him through these challenging times.

ARTHUR K. CEBROWSKI
Vice Admiral, U.S. Navy

McGibbon, Ian. *New Zealand and the Korean War: Volume II, Combat Operations*. New York: Oxford Univ. Press, 1996. 508pp. $85

New Zealanders may indeed have a relatively short military history, but what the country lacks in extensive historical lineage it more than makes up for in valor and sacrifice. So too has New Zealand enjoyed an impressive record of official histories of its involvement in this century's major wars. Now, however, replacing the extensive multivolume sets that cover New Zealand's involvement in the first and second world wars, a more modest official history (like that in Australia edited by Professor Robert O'Neill) has been adopted to cover the Korean War. The work is also unique in that it is published by a university press vice a government printing office. The first volume of this history, *Politics and Diplomacy*, provided an excellent backdrop to the political

side of the conflict, both international and domestic. In the current volume, Ian McGibbon has examined in considerable detail the record and experiences of New Zealand's contribution to the United Nations effort to halt communist aggression.

New Zealand's contribution to the United Nations command was small in comparison to its efforts in both world wars, let alone in relation to the force sent to Korea by its other Commonwealth allies and the United States. The Royal New Zealand Navy was the first force in the theater, with two frigates, a force it maintained on station until September 1954. The ground force contribution followed, consisting of the 16 Field Regiment, Royal New Zealand Artillery, and signals, transport, engineer units. Named "Kayforce," the army contribution was initially approximately one thousand; by the armistice, it had increased to 1,500. Despite the modest size of these forces (well documented in the first volume), New Zealand's experience in Korea had many profound political and strategic implications for its foreign and security policy.

It would be a mistake to assume that this work is a dry recounting of a small contribution to a major conflict. McGibbon has woven a well written and compelling tale, employing not only essential hitherto unavailable documents but many personal accounts. Thus both scholars of the conflict and the general reader will find value in this volume. The experience of small forces in relation to the larger Commonwealth and U.S. commands would be particularly insightful to an American readership in the current era, where we have "rediscovered" the importance of coalition warfare. The litany of interoperability problems that New Zealand forces experienced with its allies hardly six years after the Second World War demonstrates how quickly such expertise can be lost.

Like volume 1, this is a richly illustrated work and contains many appendices with documentation of New Zealand's military involvement in the conflict, and it should be of considerable interest to the serious scholar of the Korean War. The New Zealand government and Ian McGibbon should be congratulated for continuing the tradition of serious scholarship in the documentation of the history of New Zealand's armed forces.

THOMAS-DURELL YOUNG
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Stewart, Jean Cantlie. *The Sea Our Heritage: British Maritime Interests Past and Present.* Keith, Banffshire, Scotland: Rowan Books, 1995. 304pp. (No price given)

Part narrative, part analysis, and part obituary, this is an inquiry into the wealth and decline of Britain's maritime power. Covering four centuries and more, this work explores a number of interlocking themes about maritime preeminence. The goals of the book are, firstly, to explain Britain's rise to prominence via commerce, seaborne trade, and naval competence and strength, and secondly, to point out to present-day politicians of the United Kingdom that indeed history does have

lessons—and that British statesmen and political parties should clearly comprehend that the continued prosperity and security of the United Kingdom is dependent on the sea. Then as now, the author argues, the seas were and are realms of opportunity and the means to wealth and defence.

In many ways this book is a cry from the heart. Jean Cantlie Stewart, a biographer and lawyer, is aware of history's lessons and how England's wooden walls provided protection and influence in foreign policy. But she is less well attuned to the importance of colonial commodities and trades as ingredients in the larger story of success. Her discussion of how Britain adopted the policy of free trade is admirable. Britain's move to free trade had political costs because such a shift did not maintain its seaborne leadership. This completes the first third of the book. The remainder is devoted to commentary on twentieth-century politics of maritime primacy—in other words, to the means and methods of Britain's maritime greatness and decline. Here the tone becomes more strident and the message more certain. Flags of convenience carry British cargoes, and the British merchant marine is now a shadow of its former self. The value of British cargoes may be larger than heretofore, but the regret that the Red Ensign does not wave from the sterns of merchantmen like the windjammers and steamers of yesteryear drives the author to her conclusions.

This book says little about air power, intelligence warfare, alliance politics of our times, or other themes that would have obliged Stewart to look at her thesis in another light. Like many another country concerned with its maritime strength, Britain knows that it is not by ships alone that the defence of the realm is achieved.

BARRY GOUGH
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Boyne, Walter J. *Clash of Titans: World War II at Sea.* New York: Simon & Schuster, 1995. 381pp. $27.50

Miller, Nathan. *War at Sea: A Naval History of World War II.* New York: Scribner's, 1995. 592pp. $32.50

Both books, published at the fiftieth anniversary of the end of World War II, are single-volume, comprehensive histories of the great naval battles of that war. Even though each discusses the overall political and military background of combined operations, their consistent focus is upon navies and naval operations. You must go elsewhere to find general histories of World War II land and air campaigns. Each book covers the major naval campaigns in the Atlantic and the Pacific of the British, American, German, and Japanese navies, plus the contributions of the French, Italian, and Soviet fleets. Both works describe the personalities of individual commanders and technological advancements, and each analyzes the naval tactics and strategy of the forces involved. They offer interesting insights into motivations of the battle force commanders and observations as to why things may have happened as they did. Each contains helpful maps and pictures of key ships and players. Written for the general public, both

books use narrative and personal anecdotes to explain and illuminate the strengths and weaknesses of each navy. Since each book covers essentially the same events, there is a similarity of content. However, each author has his own definite opinion as to the personalities and reasons for the success and failure of the navies involved.

As is necessary in single-volume histories, there is a relative lack of detailed, in-depth analysis of each battle. The need for brevity mandated that the authors touch only lightly on the many highly complex actions, mistakes, and successes of opposing commanders. Such attempts to cover enormously complex subjects sometimes frustrate knowledgeable readers; in this instance, however, brevity helps rather than hinders. Both books are informative and successful, and they are of interest to today's military professionals. Their conciseness allows one to stand back from the events and gain new perspectives, illumination, and instruction as to the sweep of the vast events of World War II.

For example, each book examines the differences in leadership and character of the admirals and commanders of each navy, how the officers' attitudes, outlook, and style were shaped both by their navies' history of glory or defeat, and by the strong personalities of political leaders, such as Churchill, Roosevelt, or Hitler. It is interesting for a naval officer to realize again what the corrosive fear of making a mistake, losing or damaging ships, can do to the effectiveness of a navy. In essence, it stops aggressiveness; it hands the initiative to the opponent. As has been suggested, this factor became so important as the war progressed that it often crippled the decision making of on-scene German commanders.

Equally important, both authors outline the significant differences between the strategies used by the various naval forces in the Atlantic campaigns and those in the Pacific campaigns. These differences in offensive and defensive strategy, particularly submarine targeting, led to a German focus upon what was essentially a logistics war against supply lines in the Atlantic. But in the Pacific, the Japanese strategy consistently sought, in the Mahanian sense, a great meeting of vast fleets in a single decisive battle, like the Japanese victory against the Russians at Tsushima in 1904.

Flexible, aggressive, and dynamic leadership, plus the innate qualities of the men and women who constitute navies, are often not reflected in dry calculations of orders of battle. However, as both authors state, they are crucial to the moral force that binds a navy and often can make the difference between success and failure in battle. This quality one sees early on as distinguishing the British Royal Navy as it went through the battles of 1939 and 1940. One also sees the U.S. Navy making the transition from peacetime to wartime in 1942 and 1943, growing in stature and aggressive leadership after the mistakes in the Pacific of 1941 and early 1942.

Both books examine the use of technology: the British and American success in radar, the early U.S. failure in torpedoes, the advent in the United States of more capable naval aircraft, and

the use of carrier battle groups. These all contributed greatly to the success and eventual dominance of the allied navies. The books describe how each navy, to a greater or lesser extent, was or was not able to learn and to implement quickly in the fleet the technological changes that leveraged success. Of particular interest to an intelligence officer is the recognition by both authors of the major contributions toward eventual victory of U.S. and British signals intelligence groups and antisubmarine warfare operational intelligence centers.

Walter J. Boyne, author of *Clash of Titans*, is a retired U.S. Air Force colonel and formerly the director of the National Air and Space Museum. The author of twenty-six previous fiction and nonfiction books on aviation, including *Clash of Wings*, about the air campaigns of World War II, Boyne brings the perspective of an experienced military officer. As such, he points out time and again the importance of Allied leadership and command aggressiveness as major elements of success. Due to his aviation background and evident interest in things technological, Boyne is particularly insightful and authoritative in his descriptions of the evolution of naval aircraft and the constantly improving technology that became so much a part of Allied operations.

One finds sprinkled throughout his book interesting viewpoints and statistics. For example, during the battle of Midway, Army Air Force B-17s dropped 322 bombs upon Japanese ships, none of which hit the target. Boyne also observes that Japanese naval commanders did not learn the importance of antisubmarine warfare, and therefore failed to build necessary escort ships; directly to this point, he cites the statistic that U.S. submarines sank 59.7 percent of the Japanese merchant marine. Still another example is his view of the vital importance of the U.S. fleet train and underway logistic support in the successful operations of the forward-deployed U.S. Seventh, Fifth, and Third fleets during the later Pacific campaigns.

I was especially struck by his discussion of the initial Axis invasions and Allied evacuations as early indicators of the abilities, and more importantly the psychological makeups, of the various naval forces. He points out that only two and one-half years separated the Japanese use of wooden boats in the invasion of Malaya from the myriad specialized amphibious craft and ships of D-Day. Lastly, and as very few authors of general histories do, he includes a brief review of Soviet World War II naval service, particularly in riverine warfare.

Nathan Miller, author of *War at Sea*, is a journalist, historian, and the author of twelve books of history and biography, including *The U.S. Navy: A History*, which is used as a textbook at the U.S. Naval Academy. Miller makes many of the same points as Boyne regarding leadership: the need for unified command, and the relationships between serving naval commanders and their political superiors. Interestingly enough, he flatly asserts that the underlying reason for the Allied victory "was superior leadership in adversity."

The author has definite opinions about personalities and effectiveness of political and naval leadership. For example, he likes Rear Admiral Frank

Jack Fletcher, USN, but he does not like Winston Churchill. I thought his discussion of the successes and failures of the various navies relating to the Battle of the Atlantic was especially instructive. His point about the crucial importance of logistic supply in a prolonged war, as represented by the British and American merchant fleets, is compelling. It certainly resonates today for those interested in maritime affairs, as one views the precipitous decline in tonnage, numbers, and market share of both nations' contemporary merchant fleets. I also liked Miller's use of footnotes, which added such touches of interest as the story of the Polish submarine *Orzel*.

I do have a point of disagreement, however, with one of Miller's conclusions. Over the last few years several contemporary historians have argued that dropping the atomic bombs was not needed, that the Japanese would have sought peace. Miller shares this view; however, the evidence on page 449 cited by him in support, is, in my opinion, very weak.

In summary, both are good reads, thoughtful, interesting, and concise. Of the two, I preferred Nathan Miller's *War at Sea*.

JAMES AYNESWORTH
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Lorelli, John A. *To Foreign Shores: U.S. Amphibious Operations in World War II.* Annapolis, Md.: Naval Institute Press, 1995. 362pp. $38.95

For nearly a half century Jeter Iseley's and Philip Crowl's *The U.S. Marines and Amphibious War* has been the landmark work on assaults from the sea during World War II. Since it did not address the many campaigns conducted mainly by the U.S. Army, students of amphibious operations have had to go to numerous other books to round out their knowledge of the subject. However, the Naval Institute Press has published *To Foreign Shores*, a one-volume history that addresses all the major American amphibious actions of that epic war.

The project was inspired and backed by Rolf L. Illsley, who served during World War II as a young naval officer training the crews of landing craft. Much of the research was done by Samuel Loring Morison, grandson of the eminent historian of the U.S. Navy in the Second World War. The author, John A. Lorelli, is a professor of history at a California community college and a former Navy officer with a tour on the gun-line off Vietnam. Given the background of this trio, it is no surprise (as the author freely admits) that "the book is written mainly from the naval viewpoint." The volume provides a superb account of operations from a "blue" perspective.

However, any reader interested in the landing-force side of the story will be sorely disappointed. Operations on and beyond the beach are not ignored, but they are glossed over in most instances. As an example, the combined assaults on 7 August 1942 on the islands of Guadalcanal, Tulagi, Gavutu, Tanambogo, and Florida are described in two paragraphs. The reader receives none of the detail needed to understand, much less analyze, Marine Corps tactics and capability at that point in the

war. Although a one-volume work on a topic this large cannot cover everything in depth, Lorelli could have replaced his lengthy discussions on Roosevelt, Churchill, and the development of strategy with more information on the ground side of operations.

The emphasis of Lorelli and Morison on the Navy also shows up in the scope of their research, which slights many of the rich primary sources available on the Army and Marine Corps for the years just prior to and during the war. In the entire first chapter, which covers the evolution of amphibious doctrine, all the footnotes refer to books (many of them memoirs) written long after the events in question. As a consequence, the account lacks much of the nuance so valuable to scholars and military personnel. The prewar squabbles of the Army and Marine Corps over doctrine are noted, but there is no mention that Marines themselves also were divided over how best to meet the challenges of landing across a defended beach. Similarly, the only Marine-related primary source cited for the momentous Tarawa assault is a 1948 interview with Lieutenant General Julian Smith. Given the wealth of material unearthed since Iseley's and Crowl's opus, Lorelli and Morison could have given the reader an updated analysis of each operation, instead of bare-bones summaries of well known information.

The book is at its best in developing the evolution of the "gator" navy. We learn a great deal about the acquisition and employment of landing craft and amphibious ships, and we see distinctly how naval officers applied to subsequent campaigns their hard-won experience in each battle. Lorelli has woven in sufficient personal recollections to give the operations an important human dimension and to remind us that warfare is more about brains and courage than about doctrine and technology. His work is also commendable for its emphasis on the role of logistics, a topic too often slighted by others in favor of pure battlefield narrative. The prose and the story flow well, though there are far too few maps (only eight) to illustrate the large number of campaigns that spanned a globe.

To Foreign Shores falls short of its goal of being "a complete reference" to American amphibious operations, but it will undoubtedly become a classic in its own right. As a thorough, readable account of the naval aspects of those campaigns, it makes an excellent companion to Iseley and Crowl and should be on the shelf of anyone interested in this critical component of power projection.

JON T. HOFFMAN
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Wukovits, John F. *Devotion to Duty: A Biography of Admiral Clifton A. F. Sprague.* Annapolis, Md.: Naval Institute Press, 1995. 273pp. $35

The first full-length biography of Vice Admiral Clifton A. F. "Ziggy" Sprague (1896–1955) focuses on Sprague's role as the quick-thinking commander who overcame tremendous odds to beat the Japanese in the battle off Samar—one of several clashes that made up the largest naval battle in history, the Battle of

Leyte Gulf. When Vice Admiral Takeo Kurita found the San Bernardino Strait, between the Philippine islands of Luzon and Samar, unguarded on 25 October 1944, he had an excellent chance of crushing Sprague's U.S. task group of six escort carriers, three destroyers, and four destroyer escorts with his more powerful Japanese force of four battleships, eight cruisers, and eleven destroyers, and then to attack the main Japanese objective, the U.S. beachhead on Leyte Island. Sprague turned almost-certain defeat into a stunning victory, convincing the Japanese to retreat by attacking aggressively with his aircraft (some unarmed) and destroyers, laying one of the most effective smokescreens of the war, concealing part of his force in a nearby rain squall, and bluffing the enemy into thinking that U.S. fleet carriers were nearby and likely to attack the Japanese force.

As Wukovits points out, Sprague received relatively little personal praise for the glorious American victory, largely because the U.S. Navy wanted to avoid criticism of Admiral William F. Halsey, who had taken his fleet carriers north chasing a decoy carrier force under Vice Admiral Jisaburo Ozawa. (The Japanese carriers were decoys because the "Great Marianas Turkeyshoot" in June 1944 had left them virtually denuded of planes and pilots.) This episode prompted the famous message from Admiral Chester W. Nimitz asking Halsey about the location of the task force that Halsey had supposedly assigned to guard San Bernardino Strait: "WHERE IS RPT WHERE IS TASK FORCE THIRTY-FOUR RR THE WORLD WONDERS." (Halsey did not immediately realize that the second sentence was merely "padding" added to confuse Japanese code breakers.)

When Sprague discovered that Halsey had left the San Bernardino Strait unguarded, thereby giving the Japanese their best chance since Pearl Harbor to surprise a major part of the U.S. Pacific Fleet, he shouted on the bridge of his flagship, "That son of a bitch Halsey has left us bare-assed!" Years later, writing in the margin of his copy of C. Vann Woodward's *The Battle for Leyte Gulf* (1947), Sprague commented that Halsey had lost a "golden opportunity" by failing to block Kurita's exit from the strait. Wukovits does a fine job of using Sprague's marginalia in Woodward's book to illustrate Sprague's thinking about key aspects of the Battle of Leyte Gulf. He also makes use of quotations concerning Sprague by the officers and enlisted men who served under his command.

Confusion among the public between Clifton Sprague and his fellow officer Rear Admiral Thomas L. Sprague (no relation, although both men were members of the U.S. Naval Academy class of 1917), who led the Leyte Gulf task force to which Ziggy Sprague's task group was attached, was another factor explaining why he was denied the acclaim that was rightfully his. Sprague's "modest and retiring" personality, as Rear Admiral Samuel Eliot Morison described it, also contributed to a lack of public awareness about his crucial role in the battle. The result is that authoritative histories of World War II are still being written that do not mention Clifton Sprague or that give credit for the naval victory off Samar to

Thomas Sprague (see Gerhard L. Weinberg's massive 1994 *A World at Arms: A Global History of World War II*, for example). In stark contrast, Rear Admiral Morison dedicated to Clifton Sprague the Leyte Gulf volume (no. XII, published in 1958) of his masterful *History of United States Naval Operations in World War II*, in recognition of Sprague's superb performance at the battle off Samar.

The frequent neglect of Sprague is especially unfortunate because he contributed much more to his beloved Navy than just one victory. He trained the crew of his first afloat command, the seaplane tender *Tangier*, so well that it was one of the first ships (if not the very first) to return Japanese fire at Pearl Harbor. He also made his first aircraft carrier command, USS *Wasp*, into a model fighting machine that played a key role in the Battle of the Philippine Sea in June 1944. Prior to the war, Sprague had been a pioneer naval aviator who foresaw the value of air power at sea and helped to develop the equipment and techniques of naval aviation.

The author, John Wukovits, is a history teacher with a master's degree from Michigan State University. He has written extensively about the Pacific War, including biographical essays on admirals Halsey and Raymond A. Spruance. He has published more than a hundred articles for twenty-five different publications, including the *Naval War College Review* and *Naval History*. Although his deep respect and warm admiration for Sprague are obvious throughout the book, Wukovits criticizes him when he believes it is warranted. For example, he notes that men died unnecessarily off Samar because Sprague did not ensure that Vice Admiral Thomas C. Kinkaid, the commander of the U.S. Seventh Fleet, had provided for search-and-rescue operations after the battle against Kurita's force.

If *Devotion to Duty* has a flaw, it is that Wukovits has written what might be termed a "military biography." We learn a great deal about Sprague the warrior but much less about Sprague the man, particularly Sprague the family man. Part of the lack of information may be due to Sprague's modesty and reticence, but one wonders if there is not more to know about the personal life of a man who was the brother-in-law of F. Scott Fitzgerald (having married the novelist's younger sister Annabel in 1925). Wukovits claims that Fitzgerald held Sprague in high regard, citing as evidence a 1940 letter in which the novelist speculated "whether Clifton Sprague has become a great power in the Navy."

Beyond that point there are only a few nits. Wukovits refers to Halsey as "Bull" without explaining that his nickname (like that of Major General Joseph Hooker in the Civil War, "Fighting Joe") had been bestowed on him by journalists and was not used by the man himself or his friends. The author's language is occasionally awkward: he refers at least twice to an electrically heated flying suit as being heated "electronically," and he sometimes splits an infinitive. The maps in this book, although useful, could be clearer and certainly more attractive. In contrast, the selection of photographs is excellent.

On the whole, Wukovits has produced a thoroughly researched, well

written book that will be of interest to the naval history expert, as well as to the general reader. One cannot finish *Devotion to Duty* without thinking that Clifton Sprague was indeed the sort of naval officer for whom his men, as one of them said to him, "would have gone to hell and back twice."

TIMOTHY J. LOCKHART
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Galantin, I. J. *Submarine Admiral.* Chicago, Ill.: Univ. of Illinois Press, 1995. 376pp. $26.95

Submarine Admiral, by Admiral I. J. Galantin, U.S. Navy (Retired), combines elements of memoir, submarine history, and international diplomacy to trace the author's distinguished career as a submariner, and the development of the U.S. submarine force.

Galantin's naval service put him in position to participate in some of the most important operations and initiatives in U.S. submarine history. A graduate of the Naval Academy class of 1933, Galantin completed submarine school in 1936 and seasoned himself for four years on the unwieldy submarine minelayer USS *Argonaut* (SS 166). During World War II he commanded USS *Halibut* (SS 232). *Take Her Deep!,* his previous book, was a vigorous, highly readable account of his successful war patrols, for which he earned the Navy Cross and three Silver Stars.

In the postwar era, Galantin advanced steadily through various submarine and surface commands. From 1955 to 1957 he served as the head of the submarine warfare branch when the billet was the senior submarine-focused position in the Chief of Naval Operations staff (OpNav), responsible for all submarine operational matters and coordination of all submarine plans and programs. He later relieved Rear Admiral William F. "Red" Raborn, Jr., and directed the Special Projects Office from 1962 to 1965. Galantin retired in 1970 with four-star rank.

The author held the OpNav job at the beginning of the nuclear submarine era, when USS *Nautilus* was setting records and the Navy was building both diesel and nuclear boats, and debating the merits of each. He contributed significantly to decisions involving submarine size, speed, and depth capabilities, and his keen analysis of the trade-offs each type required reflects a high intellect and significant operational experience. Galantin argued early and logically for increased antisubmarine warfare capabilities in U.S. submarines, and for a nuclear-powered submarine capable of launching nuclear ballistic missiles.

As director of the Special Projects Office, Galantin presided over the frenetic buildup of the strategic deterrent force to forty-one SSBNs and the sharing of Polaris and SSBN technology with the United Kingdom. He accompanied President John Kennedy to Florida in November 1963, to witness the launch of a Polaris missile from USS *Andrew Jackson* (SSBN 619).

In both his OpNav billet and as head of Special Projects Galantin contended with the authoritarian control and political influence of Hyman G. Rickover. Galantin's trenchant but gentlemanly analysis, derived directly from personal

experience, of the costs and benefits of the Rickover style on the submarine force and the Navy is in itself enough to make his book valuable reading.

Galantin pursues two themes in *Submarine Admiral.* The first is the need for accountability, seared into his psyche by the failures of the exploder in the World War II Mark 14 torpedo. As a survivor of war patrols in the Pacific, Galantin writes with intensity and authority about the systemic and personal failures that permitted the exploder to be designed, tested, and approved by the same organization. He never forgot that lesson. His second theme is the importance of antisubmarine warfare as a continuing challenge to both the subsurface and surface Navy.

Galantin writes with a fluid and readable style, easily gathering together disparate concepts and facts into sentences and paragraphs that summarize with crispness and efficiency. He includes anecdotes of his meetings with many remarkable people, such as Lord Louis Mountbatten, Robert McNamara, and Arleigh Burke.

In his preface, he modestly describes the book as an "anecdotal account." Nevertheless, it shows extensive research, and rarely will the reader encounter a history that attains such great accuracy in even the small facts. Galantin works hard to set his story in context, to the point that it is sometimes difficult to separate what he observed firsthand from what he learned after the fact or from his own research. A greater use of footnotes and the inclusion of a bibliography (there is none) would have helped make these distinctions, and they would have guided readers interested in learning more about particular topics.

Readers with little knowledge of the submarine force will find *Submarine Admiral* a useful introduction to the history of the undersea service. Readers with a submarine background will encounter much that is familiar, now illuminated by the observations of a submariner who was there when the decisions were made.

WILLIAM GALVANI
Director, Naval Undersea Museum

Loveland, Anne C. *American Evangelicals and the U.S. Military, 1942–1993.* Baton Rouge, La.: Louisiana State Univ. Press, 1997. 356pp $55

One of the significant demographic changes in the U.S. military since World War II has been the tremendous increase in the presence of Protestant evangelicals throughout the ranks. Loveland's volume provides a thorough history and analysis of the rise of evangelicals within the military and of the work of nondenominational organizations providing ministries to service members. The religious changes within the military have paralleled those of American culture at large. While in the past few decades there has been a steady decline in "mainline denominations," there has been enormous growth in denominations and groups that are more conservative theologically.

Since the Vietnam War the evangelistic efforts and desires of evangelicals for numerical and spiritual growth within the military were accompanied by a growing influence in national

security policy. Evangelicals have generally maintained a pro-defense and pro-military stance, which enabled them to move from the fringes of the chaplaincy and religious life within the services to a much more prominent and influential role. The careers of such senior officers as generals William K. Harrison, Harold K. Johnson, Ralph E. Haines, and John A. Wickham demonstrate the influence of personal religious convictions upon leadership, policies, and programs. Evangelical groups like the National Association of Evangelicals, the Navigators, and the Officers' Christian Fellowship have played a major role in assisting evangelical chaplains and others working within the military for a greater perspective and presence. As a result of these efforts "the success of the evangelicals' campaign within the armed forces matched their growing presence and political influence in American society as a whole."

Throughout the 1950s and 1960s evangelicals gained access to the federal government and public recognition, but their relationship with the military was filled with tension. The high percentage of military leaders coming from the mainline Protestant denominations like the Presbyterians, Episcopalians, Lutherans, and Congregationalists, as well as differing theological perspectives among evangelicals, created misperceptions and generated resentment, suspicion, and conflict. Much of it centered on chapel services, religious curricular resources, and constitutional concerns regarding religious freedom violations. In the late 1960s a concerted effort by evangelicals to improve their relationship with the military leadership, and the general evangelical support of the war effort in Vietnam, opened a new era of military growth for them. Additionally, during the last three decades a shifting religious composition within the military has enhanced the evangelical presence, which has been felt throughout the ranks.

Evangelicals have participated in the debates regarding selective service, national security policy, nuclear arms, the Korean War, the Cold War, the Vietnam War, homosexuals in the military, religious pluralism, and constitutional issues relating to the chaplaincy. In each of these issues the evangelical voice was raised, and its influence increased.

Loveland's volume is thus more than simply a religious history relating to the military. It is a thorough analysis of one aspect of the religious and cultural changes that have occurred in the military in the last fifty years.

Anne Loveland teaches American history at Louisiana State University and has authored several works on American cultural and social history. Her volume is thoroughly documented and well researched. It should reach an audience far greater than the evangelicals in the military, since it affords readers an in-depth case study on the course and dynamics of the organizational influence of ideological groups. For the military leader, the volume offers a history and examination of the religious character of a significant and growing proportion of the armed forces. Over the last half century the evangelicals' mission to the military and their desire and ability to influence national policy have developed along parallel lines. This volume clearly demonstrates that religion in the military is a viable and potent

force to be understood off the battlefield as well as on it.

TIMOTHY J. DEMY
Commander, U.S. Navy, Chaplain Corps

Coye, Beth F. *My Navy Too*. Ashland, Ore.: Cedar Hollow Press, 1997. 415pp. $16.95

When assessing how the U.S. Navy, or any other branch of the armed services, should respond to changes in society at large, it is important to keep in mind that the U.S. military exists not simply to defend a piece of geography—it also exists to defend a way of life. If defense of the homeland were its sole purpose, its leadership could argue plausibly that it should be composed of single, white, straight, Protestant males. Adding married people, blacks, gays, Catholics, Jews, Muslims, and women to the force certainly makes it more difficult and challenging to develop unit cohesion and maintain readiness, at least in the short run. Yet it cannot be otherwise, because American society, from its inception, has urged its citizens to "be all that they can be."

In her excellent and timely autobiographical novel *My Navy Too*, Commander Beth Coye, U.S. Navy (Retired), describes how the leading character, Tucker Fairfield, the daughter of an admiral and a Wellesley graduate, deals with the Navy's prejudices against women and homosexuals as she moves from Office Candidate School at Newport, Rhode Island, in 1960 to her retirement as a commander in 1980. But this novel is more than just a diatribe against "wrong-headed" regulations and biased male-officer attitudes against women and homosexuals. It relives, through the eyes of Fairfield and her colleagues, the events of the 1960s and 1970s that shaped the contemporary American political system: for example, the assassinations of President John Kennedy, Martin Luther King, Jr., and Robert Kennedy, as well as the tragedy of Vietnam. Moreover, it describes how the offspring of an admiral (even a woman) has access to people in the Navy hierarchy that can help smooth over the rough spots in career assignments. Finally, Coye deals realistically with the dilemmas faced by most career military officers as they move up in the ranks—such as the conflict between loyalty to one's principles and loyalty to "Big Daddy Navy," and the needs of the Navy versus one's own personal needs.

Coye tells her story through journal entries, correspondence with her parents, her admiral mentor, her college roommate, her first (and only) male lover, and her female partner. The book was written with the assistance of Vice Admiral Duke Bayne, U.S. Navy (Retired); Navy submarine commander Captain Jim Bush (Retired); his wife, Dr. Patricia Bush; social worker Kitty Clark; and Lieutenant Commander Sandra Snodderly, U.S. Navy (Retired). These five individuals correspond roughly to Fairfield's pen pals in the book.

This novel is must reading for anyone interested in understanding the struggle that women have had over the last thirty years in attaining some measure of equality in the Navy, as well as the difficulties that patriotic gay men

to serve their country. All of those "wrong-headed" military leaders, bureaucrats, and politicians, who are trying to roll back the gains that women have made and to prevent openly gay men and lesbians from serving their country, would also do well to walk in Tucker Fairfield's shoes. Maybe then they would realize that for women and gays, as for Beth Coye, it is "my [their] navy too."

Reviewer's note: I first met Beth Coye about twenty-five years ago at the Naval War College. I considered her then, as I do today, one of the finest naval officers I have ever known.

LAWRENCE J. KORB
The Brookings Institution
Washington, D.C.

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Recent Books

Bland, Larry I., and Sharon Ritenour Stevens, eds. *The Papers of George Catlett Marshall: Aggressive and Determined Leadership, June 1, 1943–December 31, 1944.* Vol. 4. Baltimore, Md.: The Johns Hopkins Univ. Press, 1996. 773pp. $55

With President Franklin D. Roosevelt and Admiral Ernest J. King, General George C. Marshall was a member of the triumvirate most responsible for American victory in World War II. Published under the auspices of The George C. Marshall Foundation, this volume of Marshall's papers encompasses the period from 1 June 1943 to 31 December 1944, a period during which American participation in the war fully tested Marshall's ability as a global strategist and a crisis manager. Subtitled "Aggressive and Determined Leadership," this volume includes 598 documents, of which 90 percent were dictated by Marshall to his private secretary. The editors do not seek to publish all the papers of the Office of the Chief of Staff, only those created by Marshall himself.

What is most evident in them is the dominant role that Marshall played in determining strategy and selecting the principal leaders for the European and Pacific theaters. As early as June 1943 Marshall directed General Jacob Devers, the commander of the U.S. Army's European Theater of Operations, to caution his air chief not to utter any public statements on the rapid growth of the Royal Air Force Bomber Command in England, lest Allied political and military leaders demand the transfer of vital resources to the Pacific theater. Correspondence between Marshall, Eisenhower, and MacArthur also indicate that Marshall personally approved every principal combat commander in Europe, North Africa, and the Pacific. Additionally, the editors provide conclusive evidence of his complete and unfailing confidence in Eisenhower's conduct during the campaign in northwest Europe, from D-Day through the opening stages of the Ardennes offensive. Maintenance of the "Europe first" strategy and advocacy of the cross-Channel attack obviously dominated Marshall's strategic thinking during 1943 and 1944.

The man who emerges from these pages is an Army chief of staff with the burden of global war upon his shoulders. Casting parochial service prejudices aside, Marshall emerges as the Army's premier strategist and leading proponent of joint-combined operations. Writing Admiral King in February 1944, Marshall opined that "the time has now come to divorce from our minds any thought other than a purely objective purpose to secure the maximum result in the shortest time from the means available." Though he was denied the role he coveted most—command of the Allied forces for the invasion of Europe—Marshall, more than any

officer, save Eisenhower himself, dictated the course of that campaign. In the process Marshall more than justified Churchill's accolade that George C. Marshall was the "true organizer of victory."

Central Intelligence Agency. *The World Factbook 1996–97*. Washington, D.C.: Brassey's, 1996. 576pp. $32.95

This edition is identical in format to its immediate predecessors: quick-lookup information and data on the world's nations and dependent territories. (It may, however, be the last available on paper.) Those who have seen these references use them continually and so need no further description; those who have not, will—if they are engaged in any form of international affairs research, politics, security or publishing—necessarily obtain copies too soon to need one either. As always, among the most valuable sections of *The World Factbook* are the appendices on international organizations (their founding, membership, etc., and not least, what the acronyms stand for). Phrases like "must-have" and "belongs on every shelf" are so overused it is difficult to communicate that here is the real thing: if you work (or copyedit) anywhere in the fields mentioned above, you need this book—both the new one each year and also, for historical reference, the old ones. (Available on CD-Rom and on the World Wide Web.)

Hays, Otis, Jr. *The Alaska-Siberia Connection*. College Station, Texas: The Texas A&M Univ. Press, 1996. 184pp. $34.95

From 1942 to 1945, nearly eight-thousand military aircraft were ferried across Alaska and into Siberia to aid the Russians in their "Great Patriotic War." More than five-thousand aircraft were the P-39s and P-63s so favored by the Russians for their tank killing prowess. As the Russians come to acknowledge the value of Lend-Lease, Otis Hays's history of the Alaska-Siberia air route fills a gap in our understanding of the period. Ferrying aircraft is not usually the stuff of drama, but here the flying conditions were so challenging and the key players so remarkably different and mutually suspicious that drama does emerge.

Hooper, Nicholas and Matthew Bennett. *The Cambridge Illustrated Atlas of Warfare: The Middle Ages, 768–1487*. New York: Cambridge Univ. Press, 1996. 192pp. $39.95

Using specially drawn maps, battle diagrams, and supplementary illustrations, this volume provides an engaging summary of the history of warfare in Medieval Europe and the Mediterranean region. The *Atlas* is both a beautifully produced introduction to the subject and a handy basic reference that summarizes the most recent scholarship on the period. Unlike most other general studies of medieval warfare, the authors have at least included maritime and naval affairs in their study, although the subject certainly does not dominate the narrative.

Indicating both sea and inland waterway routes on their maps, the authors point out in the text the rapid developments in ship design and in the employment of armed vessels in a wide variety of military activities, ranging from transport ships in the crusades, Viking ships, Venetian naval galleys, and support vessels on rivers.

Jones, David R., ed. *The Military Encyclopedia of Russia and Eurasia*. Vol. 6. Gulf Breeze, Fla.: Academic International Press, 1996. 245pp. $40

Dr. David Jones, Director of the Russian Research Center of Nova Scotia (and a former member of the Naval War College faculty), is an ideal editor for this encyclopedia project, for which fifty volumes are projected. He has a wide reputation as a scholar of, especially, Soviet military history; that background, and the documentary resources of his research center, are ideally suited to the needs of *MERE*. The present volume's seven articles constitute what the editor believes to be the only comprehensive account in any language of the Soviet World War II "air blockades"—that is, campaigns to interdict German air resupply of surrounded formations. Jones is the former editor of the *Soviet Armed Forces Review Annual* (for the same publisher). Black and white photographs, extensive line maps, diagrams, and sketches.

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